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ABSTRACT

This project attempts to develop, evaluate and implement methods and materials for the automated analysis of the stylistic characteristics of counselor verbal behavior and its effects on client verbal behavior within the counseling interview. To achieve this purpose, the project designed a system of computer programs, the DISCOURSE ANALYSIS SYSTEM. The system accepts uncoded typescripts of counseling interviews as input and performs the following functions: (1) divides counselor and client responses into independent clause units; (2) classifies response units into subcategories; (3) tabulates parameters of each speaker's contributions; (4) provides a summary tabulation of counselor and client responses; (5) classifies counselor response units into 14 empirically derived categories; (6) provides a cumulative record of selected client response types in relation to counselor response types; (7) provides a process-outcome analysis relating counselor style to changing patterns of client responses; and (8) rates counselor verbal behavior in accordance with three counseling styles. (Author)

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FINAL REPORT
Project Number 1-A-067
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AUTOMATED ANALYSIS OF COUNSELOR STYLE AND EFFECTS:
The development and evaluation of methods and materials to assess the stylistic accuracy and outcome effectiveness of counselor verbal behavior

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CHAPTER I

COUNSELING STYLE AND EFFECTS

The Problem

Until recently, efforts to conceptualize the counseling task have focused on ambiguously defined process and outcome variables. Based upon Rogers (1957) theoretical formulations, it has been widely assumed that a counselor who manifests genuineness, unconditional positive regard and accurate empathy and communicates these characteristics to the client will facilitate client growth toward self actualization. Myriad attempts to objectively quantify and evaluate counselor and trainee manifestations of these hypothetical constructs have been made (Halkides, 1958; Barrett-Leonard, 1959; Strupp, 1960; Truax, 1961; Carkhuff and Truax, 1965a, 1965b; Truax and Carkhuff, 1965; Martin, Berenson and Carkhuff, 1966; Berenson, Carkhuff and Myrus, 1966; Gross and DeRidder, 1966; Holder, Carkhuff and Berenson, 1967; VanderVeen, 1967; Demos, 1967; Carkhuff and Alexik, 1967; Berenson, Mitchers and Moravec, 1968).

These and similar studies, however, were characterized by two inherent fatal weaknesses (a) an apriori assumption was made that the process variables were operating and then raters of similar persuasion were trained in procedures to assess the manifest strength of the variables; and (b) although rater agreement has frequently been high, serious questions concerning validity must be raised due to the contaminating effect of rater bias (Hackney, 1969) and self-fulfilling expectations (Rosenthal and Jacobson, 1969). Hackney (1969) demonstrated that ratings on accurate empathy, positive regard, warmth and "appropriateness" all yielded essentially the same factor matrices when subjected to a factor analytic design!

Because of weaknesses in traditional conceptual formulations, it became clear that more rigorous experimental approaches were needed to evaluate counselor and trainee performance. The need was to operationally specify and classify process variables (independent variables) in order to assess their effects on client behavior (dependent variables). In a landmark study, Zimmer, Wightman and MacArthur (1970) subjected ratings of the verbal responses of three counselors of diverse theoretical orientation to a factor analytic design. They identified, operationally defined and classified 31 discrete classes of counselor responses. In a separate but related study Zimmer and Pepyne (1971) provided evidence that significant differences existed in the manifest behavior of three expert counselors while each was counselling the same client. Moreover, the observed behavioral differences in manifest strategies were directly related to the respective theoretical orientations of the counselors. These findings tended to explode the previously accepted myth that what occurs in counseling is affected by the "expertise" of the counselor and characteristics of the client, not by the counselor's theoretical orientation or counseling style (Fiedler, 1951; Cartwright, 1966). Finally, Hakstian, Zimmer and Newby (1971) provided evidence suggesting that the same client responded and reacted differently on seven outcome variables as a result of counseling with three expert counselors. These studies strongly suggest a need for a new approach, that of eclecticism, characterized by operationally defined counseling strategies and responses (process variables) that relate to specifiable changes in client behavior (outcome variables). The evolving research and evaluation paradigm may be conceptualized as illustrated in Figure 1.

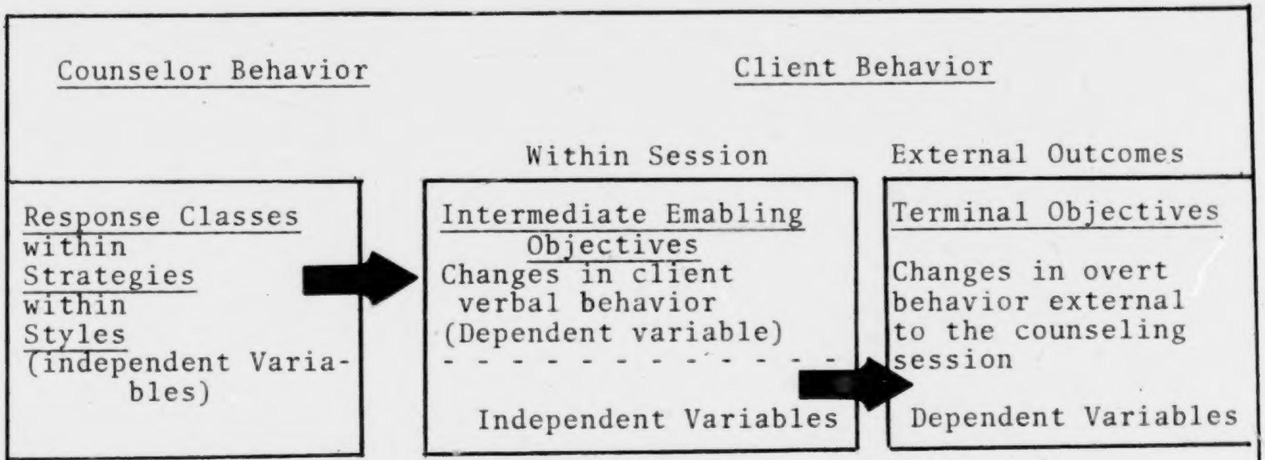
Counselor Behavior
Client Behavior
Within Session
External Outcomes
Response Classes within Strategies within Styles (independent Variables)
Intermediate Emabling Objectives
Changes in client verbal behavior (Dependent variable)
Independent Variables
Terminal Objectives
Changes in overt behavior external to the counseling session
Dependent Variables

Figure 1. Counselor behaviors constitute the primary independent variables and are defined as functionally and syntactically related responses categorized into strategies and styles of counselor behavior. When counselor strategies and/or styles (independent process variables) are manipulated what observable changes can be predicted in client verbal behavior (dependent intermediate outcome variables) within the interview? Finally, what changes in client verbal behavior within the interview (independent intermediate variables) are predictive of specifiable overt behavioral changes external to the counseling interview (dependent terminal outcome variables)?

Building upon the pioneering research of Zimmer et al, Pepyne (1971) has recently demonstrated an integrated model for counselor research, education and evaluation. This model focuses upon trainee acquisition and utilization of empirically derived, operationally defined response classes, strategies and styles of counselor behavior. Concurrently, a computer based system for the sequential automated monitoring of counselor repertoire development (SAMOCORD) has been developed and evaluated (Pepyne, 1970) to implement the Counselor Repertoire Development (CRD) training model. Components, activity flow and component-trainee interactions in the CRD System are illustrated in Figure 2.

The strength of the CRD System is its power in facilitating trainee acquisition of operationally defined process variables and automated assessment of trainee development in achieving accuracy in operating within a given counseling style. A weakness, however,

THE COUNSELOR REPERTOIRE DEVELOPMENT SYSTEM

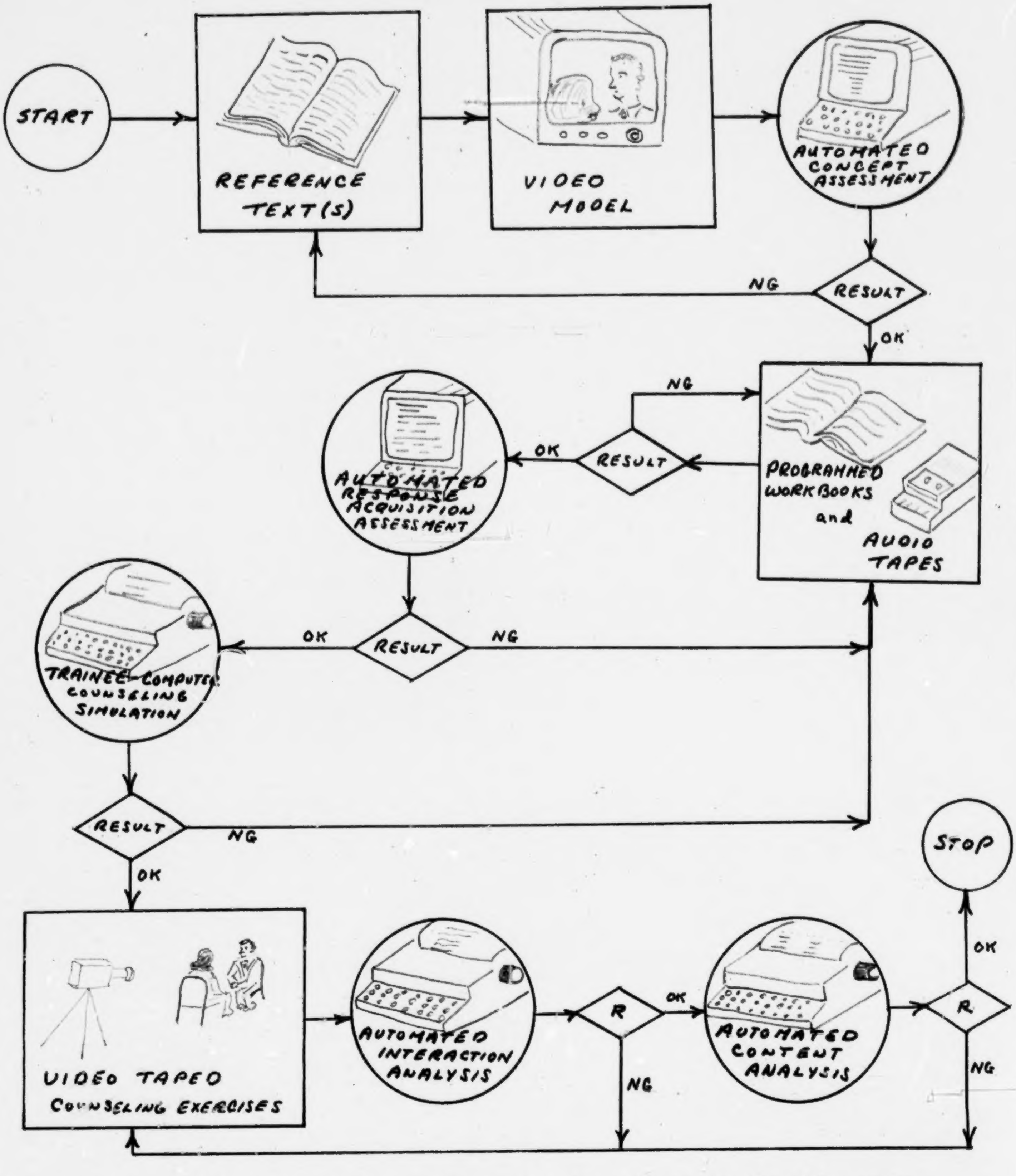
START
REFERENCE TEXT(S)
VIDEO MODEL
AUTOMATED CONCEPT ASSESSMENT
RESULT
NG
OK
PROGRAMMED WORKBOOKS and AUDIO TAPES
NG
RESULT
OK
AUTOMATED RESPONSE ACQUISITION ASSESSMENT
OK
RESULT
NG
TRAINEE-COMPUTER COUNSELING SIMULATION
RESULT
NG
OK
STOP
OK
VIDEO TAPED COUNSELING EXERCISES
AUTOMATED INTERACTION ANALYSIS
R
OK
NG
AUTOMATED CONTENT ANALYSIS
R
NG

Fig. 2. Flowchart of trainee-component interactions in the CRD system.

was in the system's inability to objectively evaluate and assess the effects of process variables (counselor behavior) on subsequent realization of intermediate enabling objectives (changes in client verbal behavior). An empirical approach to counselor education and evaluation cannot rest on the assumption that desirable outcomes necessarily follow from the counselor's stylistic accuracy. Empirical functional analysis of counselor behavior have yielded operationally defined criteria by which to identify and evaluate process variables. What was needed were the methods and materials to precisely identify and operationally define the effects of specific counselor behavior (independent variables) on subsequent client verbal behavior (dependent variables). The present project was dedicated to meeting this functional need.

Objectives and Purposes

The general purpose of this project was to develop, evaluate and implement methods and materials for the automated analysis of stylistic characteristics of counselor verbal behavior and concomitant effects on client verbal behavior within the counseling interview. This general purpose was accomplished through the development of a system of computer programs, DISCOURSE ANALYSIS (See Appendix A), which accepts uncoded typescripts of counseling interviews as input and performs the following functions:

1. Divides counselor and client responses into independent clause units.

2. Classifies response units into subcategories in accordance with person of the subject; tense of the verb; cognitive, affective or neutral mode; valence of affect; and preselected topics.

3. Tabulates parameters of each speaker's contributions, including, percent of words and clause units contributed; type/token ratio; average number of words per response unit; percent of words over two syllables, etc.

4. Tabulates a summary of counselor and client response units by person, tense, mode and valence.

5. Classifies counselor response units into 14 empirically derived categories and computes the average number of words used in each type response.

6. Prints a cumulative record of selected client response types in relation to counselor response types.

7. Provides a process-outcome analysis relating counselor style to changing patterns of client responses.

8. Rates counselor verbal behavior in accordance with three selected counseling styles (Client Centered; Gestalt; Rational Emotive).

This report describes in detail the procedures and methods employed to develop, evaluate and implement the DISCOURSE ANALYSIS system.

General Methodology

Content analysis is a research technique designed to systematically quantify and order the content of verbal communication. Typically it involves procedures for dividing verbal data into units, assigning units to categories, summarizing coded units and deriving inferences concerning the significance of these summations. A basic research value of content analysis procedures is that they force the investigator to objectively and unambiguously define the bases upon which inferences are made.

The content analysis of counseling interviews has important implications for a functional understanding of the counseling process and the systematic evaluation of counselor/client behavior (Auld and Murray, 1954). However, as Marsden has concluded, "system after system has been developed and presented in one or two demonstration studies, only to be buried in the literature unused even by its author [1965, p.315]". The major reason for the sparse and sporadic use of content analysis systems has been the lack of efficient and effective tools to facilitate the process. Somewhat analogous to the statistical process of multiple regression or factor analysis, content analysis performed manually is laborious, monotonous and extremely time consuming.

Automated Verbal Data Analysis

In recent years, utilization of computers has made the content analysis of verbal data a more manageable process. The most apparent characteristic of computers, their ability to manipulate symbols reliably at electronic speeds needs no further elaboration. But as Holsti (1967) emphasizes, less obvious but of even greater importance are other advantages derived from computer applications to natural language analysis:

"1. Computers impose rigor and discipline on the formulation of research.

2. When data are reduced to computer readable form they are amenable to reanalysis as often and for as many different purposes as desired.

3. The use of computers enables the investigator to undertake very complex problems, such as contingency analysis involving numerous variables, which often cannot be done reliably by hand.

4. Data in computer readable form can readily be reproduced and exchanged between scholars.

5. The use of the computer frees the scholar from much of the most laborious and nervous aspects of his research [Holsti, 1967, p. 115]."

During the sixties several systems, such as the GENERAL INQUIRER (stone, Bales, Namenworth and Ogilvie, 1962), WORDS (Harway and Iker, 1965) and others were developed for the automated analysis of natural language. In addition, several computer languages with expanded list processing capabilities such as LISP, SNOBAL, PL/I, COMIT, PILOT, etc. also became available. Initially these systems and languages generated high hopes and expectations among potential users. However, when generalization to other installations were attempted it became apparent that extensive revisions, installation of new compilers and concomitant expenditures of time and money mitigated against their widespread adoption or use.

To overcome the deficiencies of earlier systems, the DISCOURSE ANALYSIS system has been designed to be a versatile system with potentially wide applicability. All programs incorporated in the system are written in FORTRAN IV. Since FORTRAN IV compilers are available at nearly all computer installations, potential users can implement the DISCOURSE ANALYSIS system with minimum modification to existing programs and in some cases with no change at all.

Computer Requirements

The DISCOURSE ANALYSIS system was developed at the University Computer Center, University of Massachusetts, Amherst. It is currently operational on CDC 3600 or CDC 3800, 64K, DRUMSCOPE systems. The main program, DISCANAL, and its related subroutine require 42K words of core (one word equals eight characters). In order to process natural language words of up to 16 characters, double precision variables were used. Programs in the DISCOURSE ANALYSIS system also utilize standard CDC system subroutines and functions.

In order to fully implement the DISCOURSE ANALYSIS system 12 scratch units are required. Other peripheral unit requirements include a card reader, a line printer and a card punch. Due to the nature of the CDC 3600/3800 systems an IBM 026 key punch was used in preparing both program and data cards.

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SUMMARY

The general purpose of this project was to develop, evaluate and implement methods and materials for the automated analysis of the stylistic characteristics of counselor verbal behavior and concommitant effects on client verbal behavior within the counseling interview. A system of computer programs, the DISCOURSE ANALYSIS SYSTEM, was designed for this purpose.

The DISCOURSE ANALYSIS SYSTEM accepts uncoded typescripts of counseling interviews as input and performs the following functions:

1. Divides counselor and client responses into independent clause units (93% agreement with human coders).

2. Classifies response units into subcategories in accordance with person of subject; tense of verb; cognitive, affective or neutral mode; valence of affect; and preselected topics (86% overall agreement with human coders; 93% to 97% agreement within individual categories).

3. Tabulates parameters of each speaker's contributions, including percent of words and clause units contributed, type/token ratios, average number of words per response unit, percent of words over two syllables, etc.

4. Provides a summary tabulation of counselor and client responses by person, tense, mode and valence.

5. Classifies counselor response units into 14 empirically derived categories (89% agreement with human coders) and computes the average number of words used in each type of response.

6. Provides a cumulative record of selected client response types in relation to counselor response types.

7. Provides a process-outcome analysis relating counselor style to changing patterns of client responses.

8. Rates counselor verbal behavior in accordance with three selected counseling styles (Client-Centered; Gestalt; and Rational Emotive).

The DISCOURSE ANALYSIS SYSTEM is written in FORTRAN IV to permit implementation on a wide variety of computer installations. The system is designed to combine the rigor of behavioral research with the wide applicability of classical content analysis procedures. Experience to date indicates that it is a valid and reliable system with potentially broad interdisciplinary appeal.

CHAPTER II

DEVELOPMENTAL AND EVALUATIVE PROCEDURES

Unitizing Verbal Data

Defining the Unit. Dividing verbal data into psychologically meaningful, objectively defined units is a necessary first step in content analysis. Many verbal units have been suggested for automated analyses. Stone, Bales, Namenworth and Ogilvie (1962) and Zimmer and Cowles (1972) developed programs in which the sentence constituted a unit of analysis. While the sentence may serve reasonably well as an objectively defined unit in the analysis of published, pre-edited material, it falls short as a reliable unit in the analysis of oral discourse. The capricious syntactic patterns of oral conversation place too great a burden on the punctuation skills and related biases of the transcribing typist. Even when reliably transcribed oral sentences yield units of widely varying size and differing degrees of semantic ambiguity which defy objective classification. Waskow (1962) offered an approach which further confused the issue by defining a response unit as a client response bounded by counselor responses. Pep,ne (1970), Zimmer and Cowles (1972) and others have gone to the opposite extreme, using individual words as the verbal units in computer based content analysis systems. While words constitute objective reliable units, taken singly they fail to provide a psychologically meaningful basis for analysis.

A response has been defined as the smallest meaningful unit of behavior. What was needed was such a response unit for the automated analysis of verbal behavior. Fries (1952) defined the simple sentence as the minimum utterance that can be understood. Auld and White (1956) delimited Fries definition and defined a verbal unit as "an independent clause, standing by itself or with one or more dependent clauses [1956, p. 273]." To implement this definition they developed the following nine linguistic rules for dividing counselor and client verbalizations into clause units:

"1. The unit consists of an independent clause standing by itself or occurring along with one or more dependent clauses.
2. A clause is a statement containing a subject (explicitly stated) and a predicate, with or without modifiers.
3. An independent clause can often be distinguished from a dependent clause by the facts that (a) when two independent clauses are connected, the second may be introduced by a coordinating conjunction or a conjunctive adverb and (b) dependent clauses, which are always used as parts of speech are introduced by subordinating conjunctions or by pronouns such as who, which or that.
4. Some combinations of words without an expressed subject and predicate can make complete sentences and therefore units. These are called elliptical sentences.

Examples:
(a) "Speak" (a command);
(b) "Good!" (an exclamatory sentence);
(c) "What" (a supplement question);
(d) Therapist: "What room did they give you?"
Patient: "The same one I had before."
(Patients utterance is a completive sentence)

5. False starts do not count as separate units. Example: "And Wednesday night uh I more or less -- I didn't high pressure him" (one unit). "And Wednesday night uh I more or less" is not scored as a separate unit. Linguists call the construction "an acolonthon."
6. Utterances lacking some essential feature of a complete sentence because of an interruption by the other speaker or a lapsing into silence are considered separate units wherever the meaning is clear. Linguists call this construction "aposiopesis". Example: "And he would bring the female to the point where she would become very erotic--". When the speaker has not said enough to make his meaning clear, we do not consider his utterance a unit, and we bracket the phrase.
7. Affirmations and negations are not counted as separate units if the patient goes on to amplify or explain. Example: "Yes, I was happy at home" (one unit). But if the affirmation stands alone it is separately unitized. Example: Therapist: "Did the treatment help you?' Patient: 'Unh huh./ I was, I was strictly on an ulcer diet/' (two units for patients utterances).
8. Phrases like you know, I guess and isn't it when added on to a sentence are not considered separate units. Example: 'Some very serious thing may be happening, you know.'
9. If one independent clause is interrupted parenthetically by another independent clause, each is scored as a separate unit. Example: 'And the uh -- again I didn't uh go to any frenzy or have any all-out emotional exhibition on my part, except that I enjoyed it./ But it wasn't too obvious, I don't imagine./ I enjoyed it in a passive way, I guess you'd say./' This example is typical in its complexity. The false start at the beginning is not considered a unit. One unit is: 'But it wasn't too obvious I don't imagine.' A second unit is: 'Again I didn't go to any frenzy or have any all-out emotional exhibition on my part, except that I enjoyed it--enjoyed it in a passive way, I guess you'd say.'

As explained in Rule 8, the phrases, 'I don't imagine' and 'guess you'd say' are not considered separate units [Auld and White, 1956, pp. 273-275]."

A tenth rule suggesting that each five seconds of silence might also be considered a response unit was not applied in this study.

Auld and White (1956) also provided evidence of the reliability of this unitizing procedure. Further evidence of the reliability of the unitizing procedure has been provided by Pepyne (1968) and Crowley (1970). Because the Auld and White method appeared to be a reliable procedure for identifying psychologically meaningful units it was adopted for use in this project.

Establishing Criterion Performance. To establish a standard of unitizing performance to which computer output could be compared, two human coders were trained to a minimum criterion of 90% agreement in unitizing five consecutive 30 minute experimental interviews. Each coder worked independently and coded only client responses. Table 1 summarizes coder agreement at the conclusion of the training program.

TABLE 1

RELIABILITY OF UNITIZING BY
HUMAN CODERS AFTER
CRITERION TRAINING

	Interview I.D.	Number of agreed on units	Number of units marked by coder 1 but not by coder 2	Number of units marked by coder 2 but not by coder 1	Percent of agreement of coder 1 with coder 2	Percent of agreement of coder 2 with coder 1
	1.	126	5	2	96%	98%
	2.	380	5	15	99%	96%
	3.	247	15	20	94%	93%
	4.	343	17	23	95%	94%
	5.	355	14	17	96%	95%
Summary Tables		1451	56	77	96%	95%

After the training program each pair of coded typescripts was reviewed by a committee consisting of the principal investigator and the two coders. Disagreements in coding were resolved by consensus or majority vote. Thus five criterion coded interview typescripts were developed for use in computer program development.

Automated Unitizing. The five interviews unitized by the human coders were converted to computer readable form on punched data cards. An initial version of a computer program, SUBROUTINE CLAUSE, was developed and incorporated into a modified version of a program originally developed by Zimmer and Cowles (1972) to read verbal data, perform frequency counts, etc. The interviews were then unitized by the computer program. As expected, initial output fell far short of the criterion standard of 90% agreement with the human coders. Employing an iterative process (program modifications, rerun data, compare output with criterion, program modifications, rerun data, etc, etc., etc.) SUBROUTINE CLAUSE was finally developed to the required standard of agreement.

Cross Validation. Five new experimental interview typescripts were coded independently by the two human coders. Following independent coding, disagreements were resolved in accordance with the procedure previously described. Uncoded typescripts of the five interviews were punched on data cards, one line of text to a card. (Rules for keypunching data are listed in Appendix B.) For a more precise check on the consistency of computer and human coder agreement and to assess the potential validity of subsequent partial analyses, each interview was analyzed in five segments of six minutes each. Results of the agreement between the results of the human coders and the output of SUBROUTINE CLAUSE are presented in TABLE 2. A comparison of the data in Table 1 and Table 2 reveals that computer agreement with the composite results of the human coders (93%) was about as high as the agreement of the human coders with each other (96%; 95%). This is impressive in as much as the computer output was compared against a composite performance which provided a somewhat more rigorous criterion.

CLASSIFYING CLAUSE UNITS

Defining Response Classes. In a recent review, Salzinger (1967) emphasized that "response class is an indispensible concept for the examination of verbal behavior [p. 53]." For purposes of this project a verbal response class was defined as a group of similar verbal responses (response class members) possessing common characteristics amenable to objective, operational definition. To facilitate the functional analysis of both client and counselor verbal behavior, appropriate categories were sought to structure a relevant classification system.

Certain characteristics of client verbal behavior have been suggested as markers of therapeutic movement in counseling. Included among these are the following characteristics:

TABLE 2

VALIDATION OF AUTOMATED UNITIZING

Interview I.D.	Six Minute Segments	Number of Agreed on Units	Units marked by computer but not by humans	Units marked by humans but not by computer	Percent of agreement of computer with humans	Percent of agreement of humans with computer
6	1st	85	7	9	92%	90%
	2nd	64	6	6	91%	91%
	3rd	72	9	15	81%	83%
	4th	69	7	7	91%	91%
	5th	90	1	2	99%	98%
	all	380	30	39	93%	91%
7	1st	49	4	4	92%	92%
	2nd	52	6	2	90%	96%
	3rd	45	7	5	87%	90%
	4th	53	4	5	93%	91%
	5th	32	2	2	94%	94%
	all	231	23	18	91%	93%
8	1st	106	2	1	98%	99%
	2nd	87	8	7	92%	93%
	3rd	92	3	2	97%	98%
	4th	91	8	5	92%	95%
	5th	93	4	7	96%	93%
	all	469	25	22	95%	96%
9	1st	43	6	1	88%	98%
	2nd	29	1	2	97%	94%
	3rd	47	5	4	90%	92%
	4th	45	3	3	94%	94%
	5th	56	2	3	97%	95%
	all	220	17	13	93%	94%

10	1st	75	1	2	99%	97%
	2nd	63	8	5	89%	93%
	3rd	51	5	5	91%	91%
	4th	54	9	9	86%	86%
	5th	40	5	4	89%	91%
	all	283	28	25	91%	92%
Summary Totals		1583	123	117	93%	93%

1. Self exploration and relevation (Rogers, 1961; Jourard, 1964; Carkhuff, 1969, 1972, 1973).
2. Present time perspective (Rogers, 1961; Perls, 1969, 1973; Ellis, 1962).
3. Free expression of emotions (Rogers, 1961; Perls, 1969, 1973; Fagan & Shepherd, 1970; Carkhuff, 1972).
4. Cognitive deliberation and decision making (Ryan and Krumboltz, 1964; Ellis, 1962; Carkhuff, 1973).
5. References to topics relevant to the client's current life situation (eg. home and family, school and education, job and career, personal-social interactions, sex, etc.)

These five characteristics served as the basis for the categories used in the response classification system developed in this project. The general response categories used are outlined in Figure 3.

Determining Person and Tense. The subject and predicate of each clause was identified in this project in accordance with conventional rules of grammatical parsing. However, in accordance with unitizing rule #8, phrases such as "I think", "I mean", "I guess", "I don't know", "you know", "isn't it" were disregarded when used to introduce or tag an otherwise complete response unit.

For the purposes of this project clauses were classified according to person of the subject by the following rules:

A clause was defined as ....

1. a first person response if the personal pronouns "I" or "we" were used as the subject.
2. a second person response if the personal pronoun "you" served as the subject.
3. a third person response if any other word(s) served as the subject.

OUTLINE OF CATEGORIES IN RESPONSE CLASSIFICATION SYSTEM

I. Person of subject of the response
    A. First - "I" or "We" as subject
    B. Second - "You" as subject
    C. Third - other subject

II. Tense of predicate
    A. Past
    B. Present
    C. Future

III. Mode of expression
    A. Affective - expressions of positive or negative emotions
    B. Cognitive - expressions of intellectual activity
    C. Mixed -(both affective and cognitive)
    D. Neutral -(neither affective nor cognitive)

IV. Valence of affect
    A. Positive - pleasurable, approach posture.
    B. Negative - unpleasant, avoidance or attack posture.
    C. Neutral - (neither positive nor negative)

V. Selected topics
    A. School and education
    B. Home and family
    C. Other

Fig. 3. Standard grammatical rules were used in defining person of subject and tense of verb. Special dictionaries were prepared for the determination of mode, valence, and topic classifications. See Appendix C.)

Clauses were classified as present, past or future oriented responses in accordance with these rules:

A clause was defined as a ....

1. past oriented response if the principle verb ended in the letters "ed" or if any of the following words were included in the simple predicate:

    ate
    been
    bit
    bought
    got
    had
    heard
    hung
    sat
    saw
    sent
    spoke

built
came
caught
did
done
drank
drove
drunk
felt
found
gave
kept
knew
laid
left
lit
made
paid
ran
rode
said
sank
stole
sank
sung
sunk
swam
taught
thought
was
went
were
wrote

2. future oriented response if the simple predicate included the auxiliary verbs "shall" or "will", or the verb "going" followed by an infinitive.

3. present oriented response if the clause did not meet criteria for past or future oriented responses.

The key words used in these rules to determine the person or tense classification of a clause may be expressed or implied. For example:

Counselor: "You are angry?"
PERSON = SECOND
TENSE = PRESENT

Client: "No."
PERSON = FIRST
TENSE = PRESENT

The client's response, "No", is assumed to imply the full response, "No, I am not angry."

These rules evolved from a reciprocal process of computer program and rule development. The units previously identified by automated analysis of the first five experimental interviews were used as data for developmental purposes. Two human coders, former high school English teachers, independently classified each unit according to person and tense. The coders utilized conventional grammatical principles in their coding. All counselor and client response units were classified. SUBROUTINE PARS, originally developed by Cowles, was modified and updated to perform the parsing requirements of the analysis. In order to apply the basic rules it was necessary that the program have the capacity to associate each word in the clause with a part of speech. SUBROUTINE PERTNS was then developed to apply the rules and classify the clause according to person and tense.

Using the composite results of the human coders as a criterion standard, an iterative process, similar to that used in unitizing, was employed to reach the required 90% average agreement with the human coders.

Determining Mode, Valence and Topic. A great variety of words have been suggested as indicative of mode, valence or topic of a verbal response. (Pepyne, 1968; Crowley, 1970; Zimmer and Cowles, 1972). From these and other sources (Perls, 1969, 1973; Carkhuff, 1969, 1972, 1973; Ellis, 1962; Harris, 1967) five key word dictionaries were developed (See Appendix C) to operationalize the following definitions:

Positive affect word - a word which connotes a favorable or pleasurable condition to be enjoyed, approached or admired.

Negative affect word - a word which connotes unpleasantness to be avoided or attacked.

Cognitive word - a word which connotes intellectualization, or cerebral processes.

School reference - a word which refers to school, educational materials or facilities, professional personnel, study, courses, schedules, activities, etc.

Family reference - a word referring to home, parents or near kin.

To keep dictionaries as small but as comprehensive as possible, word stems were used as entries whenever possible. Word stems are key words stripped of the following suffixes: "s", "e", "es", "ed", "ly", "ing", "ful", and "fully". The resultant entry totals were negative affect, 288; positive affect, 173; cognitive, 187; school references, 74; and family references, 35.

A clause was classified as ....

1. an affective mode response if it contained a word from the positive or negative affect word dictionary or contained a form of the words "feel" or "seem".

2. a cognitive mode response if it contained a word from the cognitive word dictionary, or a word ending in the suffix "ology".

3. a mixed mode response if it fulfilled the criteria of an affective and cognitive response.

4. a neutral mode response if it did not fulfill the criteria of either an affective response or a cognitive response.

5. a positive valence response if it contained a word from the positive affect dictionary which was not preceded by the word "not" or a contraction thereof.

6. a negative valence response if it contained a word from the negative affect dictionary which was not preceded by the word "not" or a contraction thereof, or a word from the positive affect dictionary preceded by the word "not" or a contraction thereof.

7. a mixed valence response is it fulfilled the criteria of both a positive and negative valence response.

8. a neutral valence response if it failed to fulfill the requirements of either a positive or negative valence response.

9. a school reference response if it contained a word in singular or plural form from the school reference dictionary.

10. a family reference response if it contained a word in singular or plural form from the family reference dictionary.

11. a combination reference response if it fulfilled the criteria of both a school reference response and a family reference response.

12. an other reference response if it failed to fulfill the criteria of both a school reference response and a family reference response.

SUBROUTINE MDTPC was developed to perform the automated mode, valence, topic classifications. Like the developmental processes described previously, computer program and classification rules evolved in a reciprocal iterative manner. Results of human coding of the first five experimental interviews provided the criterion performance against which the developing program and rules were evaluated. The developmental process continued until an average 90% agreement was reached in all categories.

Cross Validation of Automated Classification. All units previously identified by the computer in the second set of five experimental interviews were submitted to the two human coders who independently classified them according to person, tense, mode, valence and topic. Disagreements between the human coders were resolved in accordance with the procedure previously described. The resultant 2124 coded units served as the criterion standard against which computer output was compared.

Similar to the unitizing cross validation process, uncoded typescription of the interviews served as input data. The one difference in this case, however, was that for purposes of topic classification, where a topic key word served as the antecedent for a pronoun it was inserted in parentheses after the pronoun. The following example is indicative of the procedure used:

Client: "They (parents) were never too demanding."

With this exception, no precoding was used. For this evaluation both counselor and client responses were included. Again, each interview was analyzed in 5 segments of six minutes each. Results of agreement between the composite classifications of the human coders and computer classification are presented in Table 3. Of the 2124 units coded, human coders and computer program were in total agreement on the coding of 1802 units (85%). In individual categories agreements were as follows: person 93%; tense 93%; mode 97%; valence 97%; and topic 97%.

TABLE 3

VALIDATION OF AUTOMATED CLASSIFICATION

INTERVIEW	SEGMENT	NUMBER OF UNITS CODED	Number and Percent of Classification Agreements					
			Total Agreement	Person	Tense	Mode	Valence	Topic
6	1st	111	79(71%)	96(86%)	96(86%)	104(94%)	103(93%)	102(92%)
	2nd	93	74(80%)	86(92%)	86(92%)	90(97%)	89(96%)	90(97%)
	3rd	101	85(84%)	91(90%)	92(91%)	100(99%)	99(98%)	100(99%)
	4th	93	72(77%)	78(84%)	90(97%)	92(99%)	91(98%)	92(99%)
	5th	110	92(84%)	104(95%)	99(90%)	107(97%)	106(96%)	110(100%)
	all	508	402(79%)	455(90%)	463(91%)	493(97%)	488(96%)	494(97%)
7	1st	70	63(90%)	68(97%)	67(96%)	70(100%)	70(100%)	70(100%)
	2nd	72	56(78%)	68(94%)	63(88%)	71(99%)	69(96%)	71(99%)
	3rd	66	61(92%)	62(94%)	65(98%)	66(100%)	66(100%)	66(100%)
	4th	45	37(82%)	41(91%)	43(96%)	44(98%)	44(98%)	42(93%)
	5th	42	35(83%)	39(93%)	40(95%)	41(98%)	42(100%)	42(100%)
	all	295	252(85%)	278(94%)	278(94%)	292(99%)	291(99%)	291(99%)
8	1st	131	112(85%)	124(95%)	126(96%)	128(98%)	129(98%)	127(97%)
	2nd	103	93(90%)	98(95%)	97(94%)	99(96%)	99(96%)	96(93%)
	3rd	129	117(91%)	122(95%)	123(95%)	127(99%)	127(99%)	128(99%)
	4th	121	109(90%)	116(96%)	114(94%)	119(98%)	120(99%)	118(98%)
	5th	128	111(87%)	120(94%)	122(95%)	126(98%)	126(98%)	127(99%)
	all	617	542(88%)	580(94%)	582(94%)	599(97%)	601(97%)	596(97%)
9	1st	62	55(89%)	59(95%)	56(90%)	60(97%)	60(97%)	59(95%)
	2nd	39	29(74%)	35(90%)	37(95%)	38(97%)	38(97%)	37(95%)
	3rd	68	61(90%)	66(97%)	65(96%)	67(99%)	66(97%)	65(96%)
	4th	63	53(84%)	60(95%)	59(94%)	61(97%)	61(97%)	62(98%)
	5th	73	64(88%)	67(92%)	69(95%)	70(96%)	71(97%)	71(97%)
	all	305	262(86%)	287(94%)	286(94%)	296(97%)	296(97%)	294(96%)

10	1st	97	85(88%)	94(97%)	93(96%)	95(98%)	94(97%)	94(97%)
	2nd	84	71(85%)	79(94%)	77(92%)	82(98%)	81(96%)	82(98%)
	3rd	76	66(87%)	72(95%)	72(95%)	74(97%)	74(97%)	73(96%)
	4th	81	73(90%)	78(96%)	77(95%)	79(98%)	79(98%)	80(99%)
	5th	61	49(80%)	56(92%)	55(90%)	58(95%)	59(97%)	59(97%)
	all	399	344(86%)	379(95%)	374(94%)	388(97%)	387(97%)	388(97%)
Summary Totals		2124	1802(85%)	1979(93%)	1983(93%)	2068(97%)	2067(97%)	2063(97%)

Classifying Counselor Responses

Defining Counselor Response Classes. One of the major tasks in this project was to devise a counselor response classification system characterized by (a) demonstrated functional communalities and (b) identifiable syntactic characteristics. Zimmer, Wightman and MacArthur (1970) identified 31 types of counselor responses. Subsequently, Zimmer and Pepyne (1971) in an attempt to more parsimoniously describe important dimensions of counselor verbal behavior recast those 31 response types into six general categories:

1. Rational Analyzing
2. Eliciting Specificity
3. Confronting
4. Passive Structuring
5. Reconstructing
6. Interrogating

These six categories of counselor responses served to structure the classification system developed for purposes of automated analysis. Within these categories a total of fourteen counselor response classes which met the classification criteria were identified. The fourteen response classes, thought to be independent of theoretical orientation, were classified and defined as follows:

I. Rational Analyzing - information giving responses which establish the counselor as an authorative source of data, interpretation and identification of cause and effect relationship.

  A. Demonstrative Information Giving - a response containing a demonstrative pronouns as subject.

  B. Third Person Reference - a response containing a third person noun or pronoun as subject.

II. Eliciting Specificity - responses designed to elicit, urge, command or support specific verbal or non-verbal behaviors by the client.

A. *Imperative* - a response, implying "you" as subject, directing or commanding specific client behavior.

B. *Ability Potential* - a response suggesting specific behavior or achievements the client could or could not manifest.

III. *Confronting* - responses typified by contrasting of opposites and heightening conflict by specifying contradictions in client responses or changing the direction of discussion.

A. *Confronting Reflection* - a reflecting on previous client response(s) prefaced by such words as "but", "yet", "nevertheless", etc.

B. *Joint Imperative* - a response characterized by the words "let us" or the contraction "let's" which specifies a new direction or dimension of discussion.

IV. *Passive Structuring* - responses which convey the counselor's perceptions of the clients emotional or cognitive state or utterances which imply counselor attention, interest or support.

A. *Simple Reflection* - a response containing "you" as the subject which conveys the counselor's perception of the client's emotional or cognitive state.

B. *Minimal Social Stimulus* - utterances such as "mm-hmm", "uh-huh", "oh", "good", etc.

C. *Self References* - a response which reveals the counselors emotional or cognitive state characterized by the first person pronouns "I" or "we" as the subject.

V. *Reconstructing* - responses in which the counselor selectively refocuses selected aspects of previous client responses.

A. *Accent* - a response which restates a single word or phrase from a previous client response.

B. *Restatement* - a response which repeats at least 65% of the words in the preceding client response, typically substituting "you" for "I" and appropriately transforming the form of the verb.

VI. *Interrogating* - responses which pose direct or rhetorical questions to the client.

A. *Probe* - an interrogative response typically introduced by such words as "what", "when", "where", "why", "how", "who", "can", "could", and the like and punctuated by a question mark.

B. Rhetorical questions - a statement, verbalized as a question to make an assertion, typically tagged by such phrases as "isn't it", "don't we", "didn't you", etc.

SUBROUTINE COUNS was developed to implement this classification system. Typescripts of the interviews conducted by Carl Rogers, Frederick Perls and Albert Ellis and recorded on the films "Three Approaches to Psychotherapy"1 were used as experimental data. For developmental purposes each interview was divided into five segments of approximately equal length. Two human coders independently classified each counselor response in the first four segments of each interview. Disagreements between the human coders were resolved in conjunction with the principal investigator by consensus or majority vote. Classifications by the human coders served as criterion performance for SUBROUTINE COUNS. The first segment of each interview was used in developing the subroutine. An iterative trial and error process was employed until the required 90% agreement between computer output and human classifications was attained.

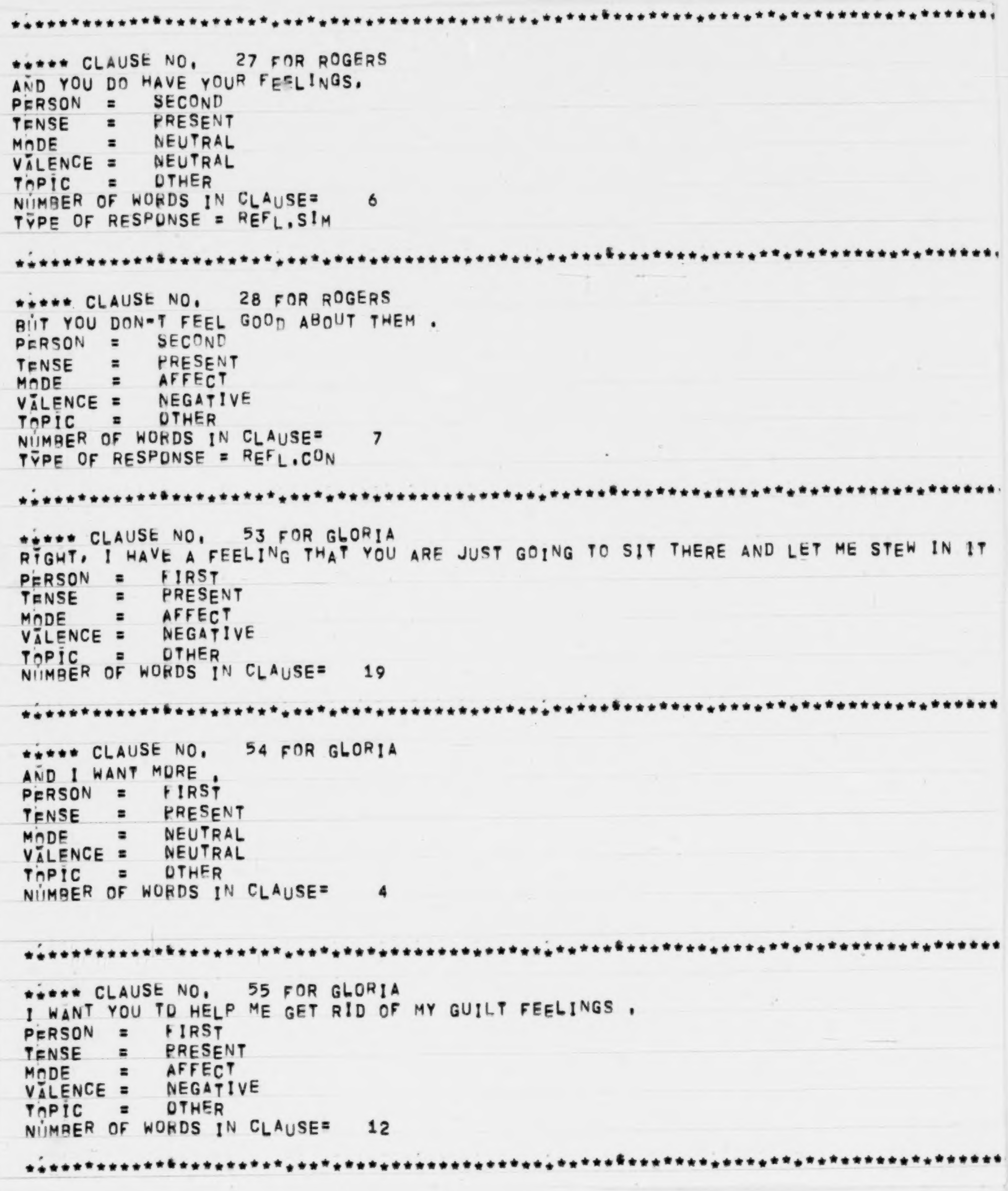
Cross Validation of Counselor Response Classifications. The second, third and fourth segments of each of the three interviews were classified by the revised version of SUBROUTINE COUNS. Agreement between human and computer classification is summarized in Table 4.

TABLE 4

AGREEMENT BETWEEN HUMAN AND COMPUTER
CLASSIFICATIONS OF COUNSELOR RESPONSES

Counselor	Interview Segment	Number of Counselor Responses	Number of Agreements	%	Number of Dis-Agreements	%
Rogers	2	22	19	86%	3	14%
	3	27	26	96%	1	4%
	4	20	17	85%	3	14%
Perls	2	49	41	84%	8	16%
	3	36	30	83%	6	17%
	4	39	35	90%	4	10%
Ellis	2	32	31	97%	1	3%
	3	35	31	89%	4	11%
	4	32	30	94%	2	6%
Summary Totals		292	260	89%	32	11%

1/ Everett Shostrum, producer; distributed by Psychological Films, 205 West 20th Street, Santa Anna, California, 92706.



```
***************************************************************************************

***** CLAUSE NO,   27 FOR ROGERS
AND YOU DO HAVE YOUR FEELINGS,
PERSON  =   SECOND
TENSE   =   PRESENT
MODE    =   NEUTRAL
VALENCE =   NEUTRAL
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    6
TYPE OF RESPONSE = REFL.SIM

***************************************************************************************

***** CLAUSE NO,   28 FOR ROGERS
BUT YOU DON-T FEEL GOOD ABOUT THEM .
PERSON  =   SECOND
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    7
TYPE OF RESPONSE = REFL.CON

***************************************************************************************

***** CLAUSE NO,   53 FOR GLORIA
RIGHT, I HAVE A FEELING THAT YOU ARE JUST GOING TO SIT THERE AND LET ME STEW IN IT
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=   19

***************************************************************************************

***** CLAUSE NO,   54 FOR GLORIA
AND I WANT MORE ,
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   NEUTRAL
VALENCE =   NEUTRAL
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=    4

***************************************************************************************

***** CLAUSE NO,   55 FOR GLORIA
I WANT YOU TO HELP ME GET RID OF MY GUILT FEELINGS ,
PERSON  =   FIRST
TENSE   =   PRESENT
MODE    =   AFFECT
VALENCE =   NEGATIVE
TOPIC   =   OTHER
NUMBER OF WORDS IN CLAUSE=   12

***************************************************************************************
```

Fig. 4. An excerpt from the clause analysis of the first six minute segment of the Rogers-Gloria counseling interview.

Of the 292 counselor responses classified, both humans and computer assigned 260 (89%) to the same counselor response class. A sample of an automated analysis is illustrated in Figure 4.

The computer program was found lacking in its ability to consistently identify three types of counselor responses: rhetorical questions, imperative responses and confronting reflections. These deficiencies should be amenable to correction by continued modification in SUBROUTINE COUNS. The time constraints of this project, however, did not permit such modifications to be made at this time.

SUMMARIZATIONS AND TABULATIONS

Counters, computational routines and a special subroutine called SUMMARY were designed to summarize and tabulate selected characteristics of counselor and client verbal behavior in each interview or interview segment analyzed. Summaries of Carl Rogers verbal behavior in a six minute interview segment are illustrated in Figure 5 and Figure 6.

SUBROUTINE SUMMARY was designed to summarize and tabulate responses of each participant by person, tense, mode and valence. An illustration of SUBROUTINE SUMMARY output is presented in Figure 7.

Among other options, summaries may be obtained from PROGRAM DISCANAL on punched card output. Six cards summarize 142 counselor response variables and four cards provide summaries of 114 client response variables.

```
RESPONSE TYPE SUMMARY FOR ROGERS

MINIMUM SOCIAL STIMULI .....   0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
ACCENT ....................    0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
RESTATEMENT ...............    1 ...........    3 PERCENT .........  8.00 WORDS PER RESPONSE
REFLECTION - SIMPLE .......    8 ...........   24 PERCENT ......... 11.00 WORDS PER RESPONSE
REFLECTION - CONFRONTING ...   1 ...........    3 PERCENT .........  7.00 WORDS PER RESPONSE
REFLECTION - CAUSATION .....   1 ...........    3 PERCENT .........  8.00 WORDS PER RESPONSE
INFORMATIONAL .............    5 ...........   15 PERCENT ......... 13.20 WORDS PER RESPONSE
IMPERATIVE ................    0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
PROBE - SIMPLE ............    3 ...........    9 PERCENT .........  5.00 WORDS PER RESPONSE
PROBE - RHETORICAL ........    0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
ABILITY POTENTIAL .........    0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
SELF REFERENCE ............   11 ...........   33 PERCENT ......... 11.64 WORDS PER RESPONSE
JOINT IMPERATIVE ..........    0 ...........    0 PERCENT .........  0.00 WORDS PER RESPONSE
THIRD PERSON INFORMATION ...   3 ...........    9 PERCENT .........  9.67 WORDS PER RESPONSE
```

Fig. 6. Classification summary of response types used by Rogers during the first six minutes of counseling interview with Gloria.

```
                                CLAUSE ANALYSIS MATRIX FUR ROGERS

CLAUSES

                       PAST                   PRESENT                  FUTURE               SUMMARY
                                                                                             TOTALS
 MODE        VALENCE   1ST  2ND  3RD          1ST  2ND  3RD            1ST  2ND  3RD
**************************************     ****************         ****************     *********************
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
             POSITIVE  *  0 *  0 *  0 *     *  9 *  6 *  9 *         *  0 *  0 *  0 *     *  24  *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
                       ****************     ****************         ****************     *      *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
 AFFECTIVE     MIXED   *  0 *  0 *  0 *     *  9 *  0 *  0 *         *  0 *  0 *  0 *     *   9  *  52  *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
                       ****************     ****************         ****************     *      *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
             NEGATIVE  *  0 *  0 *  0 *     *  6 * 12 *  0 *         *  0 *  0 *  0 *     *  18  *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
**************************************     ****************         ****************     ***************  61  *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
             POSITIVE  *  0 *  0 *  0 *     *  0 *  0 *  3 *         *  0 *  0 *  0 *     *   3  *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
                       ****************     ****************         ****************     *      *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
 MIXED         MIXED   *  0 *  0 *  0 *     *  0 *  0 *  0 *         *  0 *  0 *  0 *     *   0  *   9  *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
                       ****************     ****************         ****************     *      *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
             NEGATIVE  *  0 *  0 *  0 *     *  0 *  0 *  6 *         *  0 *  0 *  0 *     *   6  *      *      *
                       *    *    *    *     *    *    *    *         *    *    *    *     *      *      *      *
**************************************     ****************         ****************     *********************
                       *    *    *    *     *    *    *    *         *    *    *    *     *                    *
 COGNITIVE             *  0 *  0 *  0 *     *  0 *  3 *  0 *         *  0 *  0 *  0 *     *                3   *
                       *    *    *    *     *    *    *    *         *    *    *    *     *                    *
**************************************     ****************         ****************     *                    *
                       *    *    *    *     *    *    *    *         *    *    *    *     *                    *
 NEUTRAL               *  0 *  0 *  0 *     * 18 *  6 *  6 *         *  0 *  3 *  3 *     *               36   *
                       *    *    *    *     *    *    *    *         *    *    *    *     *                    *
**************************************     ****************         ****************     *********************
 SUMMARY TOTALS           0    0    0         42   27   24             0    3    3

                               0                   94                       6                      100

ALL ENTRIES EXPRESSED AS PERCENTS OF TOTAL RESPONSES BY ROGERS
```

Fig. 7. A SUBROUTINE SUMMARY tabulation of person, tense, mode and valence characteristics of responses by Rogers during the first six minutes of counseling interview with Gloria.

CHAPTER III

ANALYZING AND ASSESSING INTERVIEW INTERACTIONS

A substantial body of research indicates that verbal behavior is amenable to systematic manipulation and can be considered a function of behavioral laws. (Greenspoon, 1962; Krasner, 1958, 1962, 1965, 1966, 1967; Salzinger 1959, 1967; Strong, 1964; Williams, 1964). Skinner (1957) has long contended that although verbal behavior is a highly complex human mode of response, it is, nevertheless, subject to the same sets of variables that affect nonverbal responses. While accepting that the requirements of social communication necessitate some correspondence between external stimulus events and verbal responses and some adherence to conventional rules of grammar, Skinner has argued that

> "...Verbal behavior is shaped and maintained by a verbal environment -- by people who respond to behavior in certain ways because of the practices of the group in which they are members...The resulting interaction between speaker and listener yield the phenomenon...of verbal behavior [1957, p. 226]."

Thus, verbal behavior may be conceptualized as operant behavior in that it is voluntary behavior which "operates" on the environment and is shaped and maintained by the consequences of its occurrence. Skinner (1957) presented a verbal behavior paradigm that takes into account the importance of antecedent conditions as well as subsequent reinforcement in "eliciting", maintaining and shaping verbal behavior. This Skinnerian model is illustrated in Figure 8.

$$\begin{tikzcd}
\text{COUNSELOR:} & S^D \arrow[r] & R_1 \arrow[d] & S^{R:D} \arrow[r] & R_3 \arrow[d] & \\
\text{CLIENT:} & & S^D \arrow[r] & R_2 \arrow[u] & S^{R:D} \arrow[r] & {}
\end{tikzcd}$$

Fig. 8. The counselor and client are reciprocating participants. The first stimulus (S^D or discriminative stimulus), possibly the presence of the client, results in R_1, the counselors first response. This verbal response by the counselor serves as a S^D for R_2, the client's first response. This client verbal response, R_2, in turn serves as a reinforcer for the counselor's response (R_1) and a discriminative stimulus for further counselor responding (R_3), hence the designation $S^{R:D}$. Counselor response R_3 then serves as a reinforcer of the previous client response (R_2) and the occasion (S^D) for next client response.

In the influencial position treatise, The Counselor in a Changing World, Wrenn (1962) cited several verbal conditioning studies and concluded that "clearly what a person says is shaped by what is said to him, and in accordance with lawful patterns [p. 58]." Arguing from a behavioral perspective, Strong (1964) contended that

> "...the interview can be viewed as reciprocal verbal behavior usually between two people. The counselor talks, then the counselee talks, then again the counselor...in an interlocking pattern of verbal behavior [p. 660]."

Within this interactive process the counselor is seen as controlling the stimulus conditions of the interview. The counselor provides stimuli which are occasions for the client to emit verbal behavior which in turn generates consequences from the counselor. When as a consequence of certain client responses the counselor rewards the client with responses of increased attention, approval or affection the client "learns" new ways of talking about old problems.

The effective counselor may be conceptualized as one who arranges stimulus conditions (S^D) conducive to client verbalization, provides reinforcement (S^R) following client responses deemed situationally appropriate and extinguishes (does not reinforce or mildly punishes) client responses deemed inappropriate in terms of his theoretical orientation. In essence, counseling may be viewed as the management of contingencies of client verbal behavior; and, counseling research and evaluation as the functional analysis of interacting counselor and client verbal behavior. This suggests that a cumulative record could provide a valuable research tool to analyze and further explore client verbal behavior in the interview as a function of counselor behavior.

An Automated Cumulative Record of Client Verbal Behavior

SUBROUTINE SPOTTY was developed and incorporated into the DISCANAL program to provide a cumulative record of selected types of verbal responses. The researcher using the program has the option of specifying the person, tense, mode, valence and topic of the critical response class to be studied. Each time the client emits a verbal response the graph line is extended horizontally one unit. If the response meets the criteria of a critical response as specified by the researcher, the graph line moves vertically up one unit as well. Counselor responses are expressed as letters and appear on the record directly above (or before after the 25th critical response) the client response they followed. Figure 9 illustrates a cumulative record of Gloria's verbal behavior during the first six minute segment of the interview with Carl Rogers. The critical response class in this case is specified as client responses classified as first person, present tense, affective mode.

```
ROGERS AND GLORIA


CLAUSES



ANALYSIS FOR ROGERS

TOTAL CLAUSES=    33
AVERAGE CLAUSE LENGTH= 10.58
SHORTEST CLAUSE=     2 WORDS
LONGEST CLAUSE=   29 WORDS

TOTAL CLAUSES IN THIS SEGMENT =  97
PERCENT OF CLAUSES CONTRIBUTED =    34

TOTAL WORDS=  349
NO. DIFFERENT WORDS=  148
TYPE/TOKEN RATIO= 0.42
AVE. WORD LENGTH =  3.92

TOTAL WORDS IN THIS SEGMENT = 1192
PERCENT OF WORDS CONTRIBUTED =    29
PERCENT OF WORDS OVER 5 LETTERS =  18


PERSON OF SUBJECT

PERSON 1 ................ 14 .........  42 PERCENT
PERSON 2 ................ 10 .........  30 PERCENT
PERSON 3 ................  9 .........  27 PERCENT

TENSE OF VERB

PAST ....................  0 .........   0 PERCENT
PRESENT ................. 31 .........  94 PERCENT
FUTURE ..................  2 .........   6 PERCENT

MODE

NEUTRAL ................. 12 .........  36 PERCENT
COGNITIVE ...............  1 .........   3 PERCENT
AFFECTIVE ............... 16 .........  48 PERCENT
MIXED ...................  4 .........  12 PERCENT

VALENCE OF AFFECT

POSITIVE ...............  7 .........  21 PERCENT
NEGATIVE ...............  8 .........  24 PERCENT
MIXED ..................  2 .........   6 PERCENT

TOPIC

SCHOOL REFERENCES ......  0 .........   0 PERCENT
FAMILY REFERENCES ......  0 .........   0 PERCENT
COMBINATION ............  0 .........   0 PERCENT
```

Fig. 5. A summary of characteristics of verbal responses made by Carl Rogers during the first six minutes of counseling interview with Gloria.

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

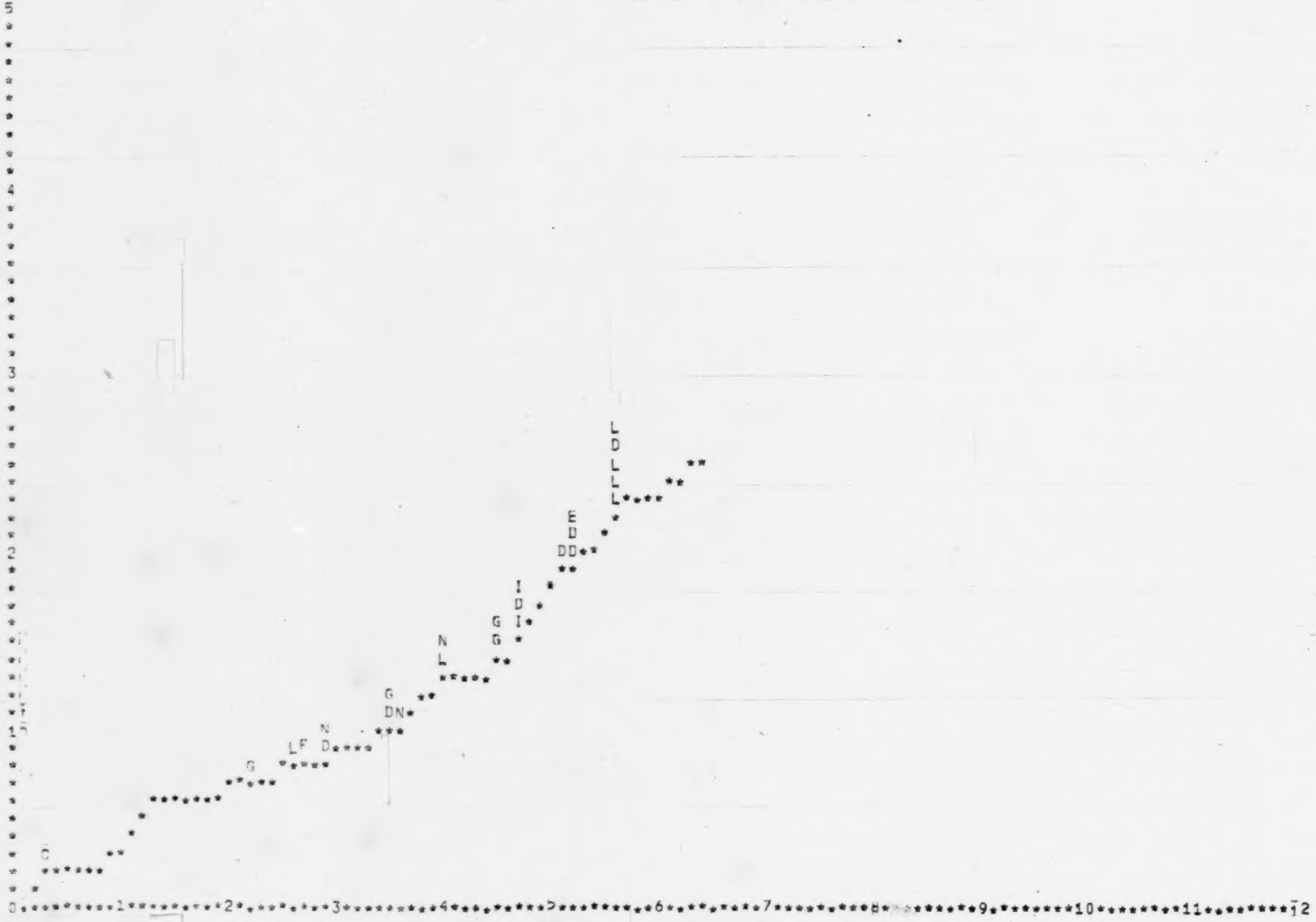


Fig.9.

```
CLIENT RESPONSE CHARACTERISTICS              KEY TO COUNSELOR RESPONSES
       PERSON  = FIRST                        A = MINIMUM SOCIAL STIMULUS   F = REFLECTION - CAUSATIVE
       TENSE   = PRESENT                      B = ACCENT                    G = INFORMATIONAL
       MODE    = AFFECT                       C = RESTATEMENT               H = IMPERATIVE
       VALENCE =                              D = REFLECTION - SIMPLE       I = PROBE - SIMPLE
       TOPIC   =                              E = REFLECTION - CONFRONTING  J = PROBE - RHETORICAL
                                                          K = ABILITY POTENTIAL
       ROGERS   / GLORIA                                  L = SELF REFERENCE
                                                          M = JOINT IMPERATIVE
       SLOPE = 0.391                                      N = THIRD PERSON INFORMATION
```

An Illustrative Experiment. To demonstrate the effects of counselor verbal behavior on client verbal responses in the interview, an experimental interview was conducted and analyzed by SUBROUTINE SPOTTY. The experimental interview was divided into two six minute segments. During the first segment, which could be called the free operant segment, counselor responses were emitted at random time intervals. During the second segment, counselor responses were again scheduled at random time intervals but were also contingent upon the preceding client response meeting the criteria of a School Reference Response. During the entire experimental interview the counselor attempted to restrict his responses to Minimum Social Stimuli and Simple Reflections. The cumulative record of the free operant period of the experimental interview is illustrated in Figure 10 and the cumulative record of the conditioning segment is illustrated in Figure 11.

A comparison of two records reveals that during the free operant segment (Fig. 10) the rate of client acquisition of critical responses was 0.052 while during the conditioning period (Fig. 11) the acquisition rate manifest a marked increase to 0.492. Results of this simple experiment as illustrated in the two cumulative records provides dramatic evidence of the critical role of contingency management in counselor responding.

Using the options provided in Program DISCANAL such a graphic analysis is possible for any preselected class of client response units. Work sheets for preparing Program DISCANAL control cards are provided in Appendix D.

Evaluating Changes in Verbal Behavior

In addition to the sequence analysis provided by cumulative records, another approach to analyzing counselor effectiveness is to measure changes in the characteristics of client behavior between segments of a given interview or over the course of several interview sessions. PROGRAM CHANGE was developed to provide statistical data on 114 client verbal behavior variables during the initial segment of an interview and to compute changes in these statistics during subsequent segments. The program also computes the mean, maximum, minimum and range for each variable. In addition to the data provided for client verbal behavior, PROGRAM CHANGE provides a similar summary for each of 142 counselor verbal response variables. Input for PROGRAM CHANGE is provided by the punched output from PROGRAM DISCANAL. PROGRAM CHANGE is listed in Appendix A. Results of summary statistics for the Rogers, Perls and Ellis interviews with Gloria are presented in Appendix E.

Assessing Counselor Style

In addition to providing analyses of changes in counselor and client verbal response characteristics PROGRAM CHANGE produces punched card output which constitute computer program statements to delimit the range of each of the 142 counselor response variables. In other words, PROGRAM CHANGE, processes summaries for an interview or series of interviews and produces

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

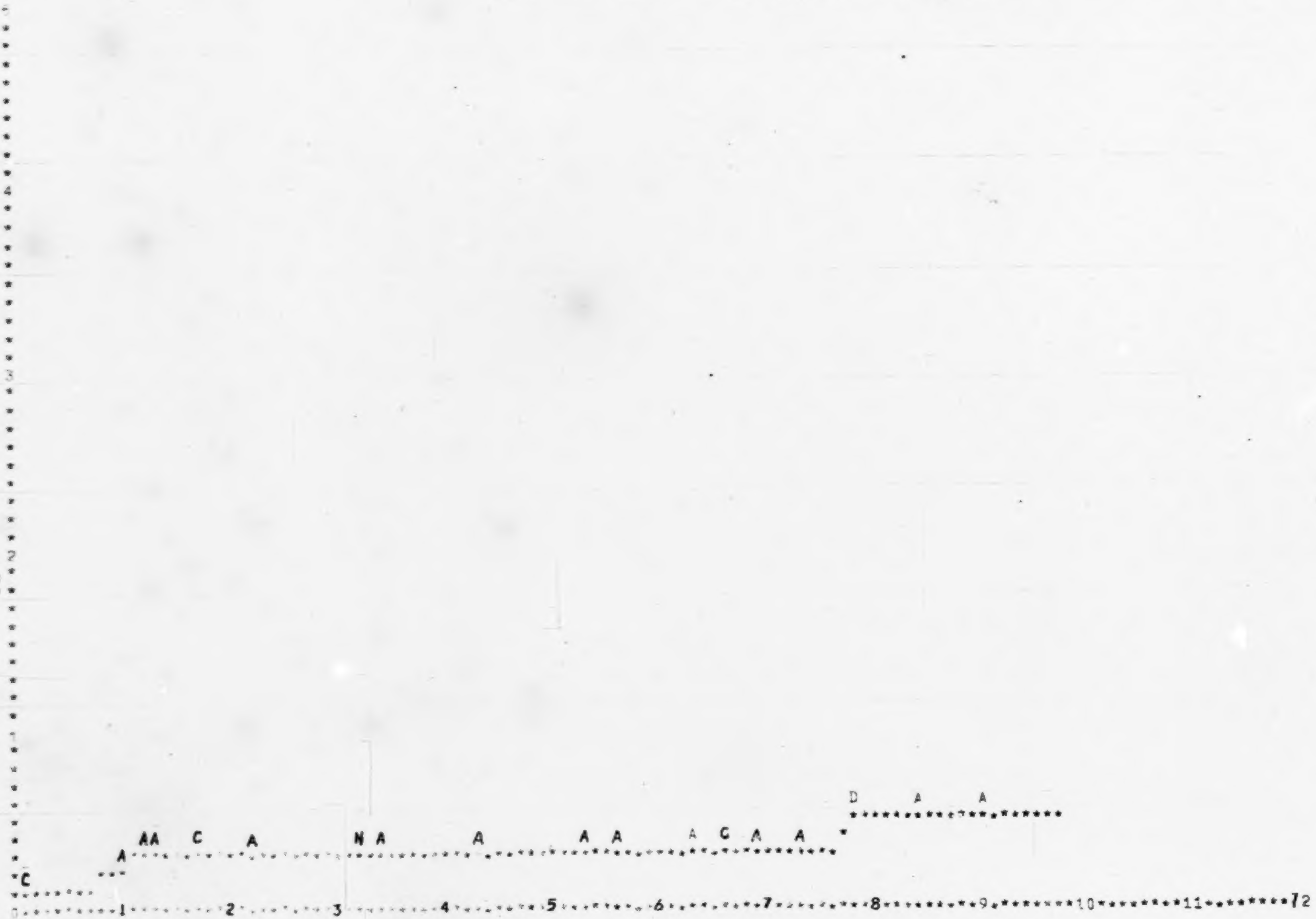


Fig. 10. CLIENT RESPONSE CHARACTERISTICS

PERSON :
TENSE :
MODE :
VALENCE :
TOPIC : SCHOOL

E / S

SLOPE : 0.052

KEY TO COUNSELOR RESPONSES
A = MINIMUM SOCIAL STIMULUS
B = ACCENT
C = RESTATEMENT
D = REFLECTION - SIMPLE
E = REFLECTION - CONFRONTING
F = REFLECTION - CAUSATIVE
G = INFORMATIONAL
H = IMPERATIVE
I = PROBE - SIMPLE
J = PROBE - RHETORICAL
K = ABILITY POTENTIAL
L = SELF REFERENCE
M = JOINT IMPERATIVE
N = THIRD PERSON INFORMATION

CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES

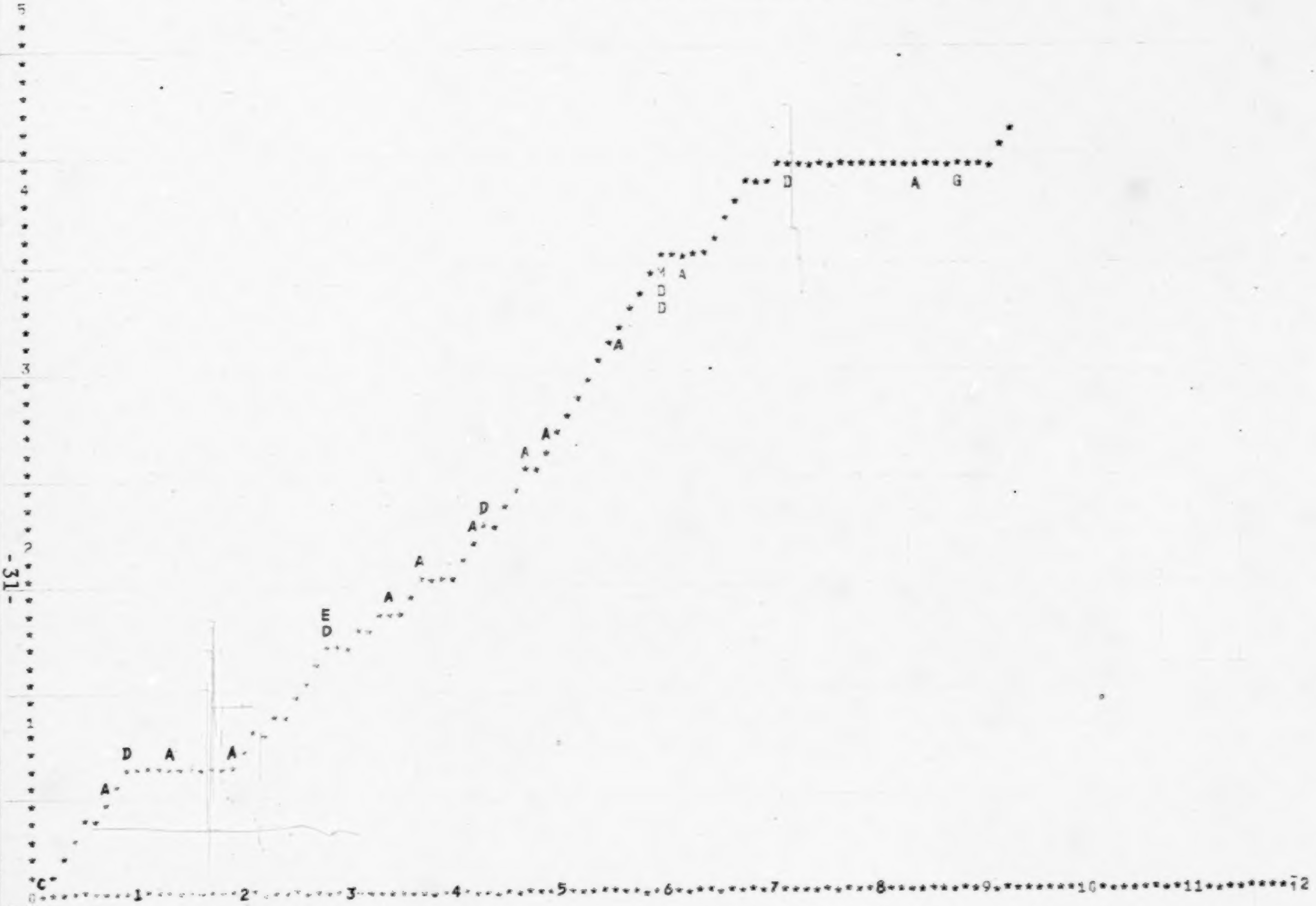


Fig. 11. CLIENT RESPONSE CHARACTERISTICS

PERSON =
TENSE =
MODE =
VALENCE =
TOPIC = SCHOOL

E / S

SLOPE = 0.492

KEY TO COUNSELOR RESPONSES

A = MINIMUM SOCIAL STIMULUS
B = ACCENT
C = RESTATEMENT
D = REFLECTION - SIMPLE
E = REFLECTION - CONFRONTING
F = REFLECTION - CAUSATIVE
G = INFORMATIONAL
H = IMPERATIVE
I = PROBE - SIMPLE
J = PROBE - RHETORICAL
K = ABILITY POTENTIAL
L = SELF REFERENCE
M = JOINT IMPERATIVE
N = THIRD PERSON INFORMATION

criterion limits for each of the 142 counselor response variables. Summaries from an interview of unknown style may then be checked against each of these criterion limits to assess the percent of agreement with a known counseling style. Any style may be used as the criterion.

Automated Assessment of Counselor Style. The first four segments of interviews by Rogers, Perls and Gloria were used as criterion performances for client centered, Gestalt and Rational Emotive counseling styles. A special computer program, PROGRAM STYLE, was designed to compare 71 selected counselor response variables against these three criterion performances. PROGRAM STYLE is listed in Appendix A. The accuracy of the program and its ability to discriminate style differences was checked by using it to assess the 12 criterion interview segments. Table 5 presents the results of this criterion assessment.

TABLE 5

AUTOMATED RATINGS OF CRITERION INTERVIEW SEGMENTS

Int. Seg.	Agreement with Client Centered Criteria	Agreement with Gestalt Criteria	Agreement with Rational Emotive Criteria
Rogers 1	100	56	72
Rogers 2	100	62	69
Rogers 3	100	69	73
Rogers 4	100	51	62
Perls 1	56	100	72
Perls 2	55	100	65
Perls 3	77	100	76
Perls 4	68	100	83
Ellis 1	59	61	100
Ellis 2	72	58	100
Ellis 3	62	70	100
Ellis 4	59	55	100

Note: Data represent percent of counselor response agreement with each of the criterion styles.

As was to be expected, each of the criterion interviews yield 100% agreement with its respective style. The extent of inter-counselor agreement, however, was somewhat higher than expected (eg. Perls interview segment 4 while yielding the expected 100% agreement with the Gestalt criteria also revealed 83% agreement with Rational Emotive criteria).

Cross Validation of Style Assessment. A final study was conducted to test the ability of PROGRAM STYLE in discrimination among eight six minute interview segments. The data base for this test consisted of segments from an experimental interview and the fifth segments from the Rogers, Perls and Ellis interviews. The experimental interview was one in which the counselor provided Minimal Social Stimuli or Simple Reflections at random time intervals. The eight interview segments were analyzed by PROGRAM DISCANAL and the punched output constituted the input data for PROGRAM STYLE. Results of PROGRAM STYLE assessments of the counseling style used in each of the interview segments is provided in Table 6.

TABLE 6

RESULTS OF AUTOMATED COUNSELING
STYLE ASSESSMENT

Int. Seg.	Client Centered		Gestalt		Rational Emotive	
	%	z	%	z	%	z
Exp. 1	52	-1.14	56	-0.40	51	-0.64
Exp. 2	58	-0.28	56	-0.40	65	0.27
Exp. 3	55	-0.71	56	-0.40	49	-1.18
Exp. 4	58	-0.28	55	-0.50	54	-0.72
Exp. 5	56	-0.57	59	-0.10	54	-0.72
Rogers 5	73	1.85	55	-0.50	73	0.81
Perls 5	66	0.85	83	2.30	68	0.54
Ellis 5	65	0.71	58	-0.20	80	1.63
Mean	60		60		62	
S D	7		10		11	

Inspection of Table 6 data reveals that in terms of percent agreement and z scores, PROGRAM STYLE correctly discriminated adherence to each of the criterion styles. At this point, however, it must be recognized that this is merely a demonstration exercise. A larger criterion data base and the expression of criterion limits in terms of standard deviations instead of ranges could be expected to sharpen the discrimination powers of the program.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Within the context of a continuing process of programmatic research (Zimmer & Park, 1967; Zimmer & Anderson, 1968; Pepyne, 1968; Kennedy & Zimmer, 1968; Hackney, 1969; Pepyne, Zimmer & Hackney, 1969; Zimmer, Wightman & MacArthur, 1970; Pepyne, 1970; Crowley, 1970; Pepyne, 1971; Hakstien, Zimmer & Newby, 1971; Zimmer & Pepyne, 1971; Zimmer & Cowles, 1972) this project has developed, evaluated and implemented methods and materials for the automated analysis of counselor and client verbal behavior in counseling interviews. The computer programs emanating from this project combine the methodological rigor of behavioral research with the broad applicability of classical content analysis procedures.

Conclusions

The general purposes of this project were achieved through the development, evaluation and implementation of a system of computer programs called the DISCOURSE ANALYSIS SYSTEM. The system consists of PROGRAM DISCANAL and its integrated subroutines, PROGRAM CHANGE AND PROGRAM STYLE. These components accept uncoded typescripts of counseling interviews as input and perform the following functions:

1. Divide counselor and client responses into independent clause units (93% agreement with human coders).

2. Classify response units into subcategories in accordance with person of the subject; tense of the verb; cognitive, affective or neutral mode of expression; valence of affect and preselected topics (86% overall agreement with human coders; 93% to 97% agreement within categories).

3. Tabulate parameter of each speakers contributions, including percent of words and clause units contributed; type/token ratios; average number of words per response unit; percent of words over two syllables, etc.

4. Tabulate a summary of counselor and client response units by person, tense, mode and valence.

5. Classify counselor response units into 14 empirically derived categories (89% agreement with human coders) and computes the number of words used in each type response.

6. Print a cumulative record of selected client response classes in relation to counselor response types.

7. Provide a process-outcome summary analysis relating counselor style to changing patterns of client responses.

8. Rate counselor verbal behavior in accordance with three selected counseling styles (Client-Centered; Gestalt; Rational Emotive).

The development, evaluation and trial applications of the DISCOURSE ANALYSIS SYSTEM has provided methods and materials for the content analysis of large bodies of interview data and has also provided a methodological approach for the combined application of content analysis and the experimental analysis of verbal behavior to further investigate the complexities of the counseling process. The present version of the DISCOURSE ANALYSIS SYSTEM is presented as a prototype model. The model, however, appears to be robust, flexible and amenable to refinements and expansion.

Recommendations

Like most research and development efforts, results of this project suggest that a vast number of additional activities and applications should be pursued.

Additional Activities. As noted in the description of the development of the system, a variety of program refinements and expansions are suggested:

1. SUBROUTINE CLAUSE could be further modified to more adequately deal with imbedded quotations, interrupted clauses, and extraneous lead and tag phrases.

2. SUBROUTINE COUNS could be refined to more accurately identify rhetorical questions and to more appropriately discriminate between self-references and reflections.

3. Additional dictionaries need to be developed to include such topics as job and career, courtship, sex and marriage, etc.

4. PROGRAM STYLE should be re-developed on a much broader criterion data base and refined statistical limits obtained in order to provide finer grained discriminations and assessments of counseling style.

5. The DISCOURSE ANALYSIS SYSTEM could be easily modified for applications to disciplines such as literature, drama, speech, foreign languages, political science, group processes, etc.

6. the DISCOURSE ANALYSIS SYSTEM could be converted from batch to interactive mode to facilitate user applications.

Recommended Research. In addition to additional R & D activities, the current version of the DISCOURSE ANALYSIS SYSTEM could be profitably employed to seek answers to such pressing counseling research questions as the following:

1. What client response characteristics, singly or in combination, correlate with client behavioral tendencies external to the counseling environment?

2. What changes in client response characteristics, taken singly or in combinations, vary with therapeutic behavioral change outside the counseling interview?

3. What characteristics of client verbal responses are related to counselor response types?

4. What characteristics of client verbal behavior are related to the timing (contingencies) of counselor responding?

5. What interactive effects of counselor timing and response type are observable in the characteristics of client verbal behavior?

6. What sampling procedures provide the optimum representation of counselor-client interactions within the total interview?

It is hoped that as researchers apply, refine, modify, or expand this system, they will share their results widely in an effort to continue the programmatic research effort of which this is a part.

As Marsden (1965) observed, "Few variables or notions about counseling interviews have received anything approaching programmatic or extensive content analysis investigation." What was needed was an unresentful drudge to perform reliably and efficiently the gargantuan clerical task involved. The DISCOURSE ANALYSIS SYSTEM fulfills this need.

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APPENDIX A

PROGRAM DISCANAL & SUBROUTINES

PROGRAM CHANGE

PROGRAM STYLE

THE AUTOMATED ANALYSIS OF COUNSELOR STYLE AND EFFECTS

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SUPPORTED IN PART BY THE USOE, DEPT. OF HEALTH, EDUCATION, AND WELFARE

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GRANT NO. UFG-1-72-0005(509)
UE-001422 NO. NIH 473622

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JANUARY 1973

```
      PROGRAM DISCANAL
      EQUIVALENCE (ICON1,ICON2),(ICO,IIWORD),(ICLZ,ICLZ2)
      EQUIVALENCE (ISPKW,IKWD),(ITPW,ITPWD)#(ICOGG,ICOG)
      DOUBLE PRECISION ICON1,IWORDA,ISPKW,ICLZ,ITPW,ICO,ICOGG,ISV
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100)#IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON /9/ IMARK(2),INN(2),IPON(2),ITEST1(2),ITEST2(2),ITEST3(2),I
     1TOTAL(2),ICTN(2),NSWDS(2)
      COMMON/10/NLET(4),IPRO(3,4)
      COMMON/11/MIN(4),MAX(4),TWD(4)
      COMMON/12/ITTPC(7,4),ICMBN(4),ICG(4),IAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON/14/JKP,ISV(100),ICOUN(20)
      COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),ITWD(4)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000),ICOG(2,200),ICOGG(200)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      COMMON /Z/ MAT1(3,3,8),MAT2(3,3,8)
      DIMENSION WORDS(4), IQU(2), IHDR(10), ITITL(10),RPRU(3),IIWORD(2),
     1RAT(3),RRAT(3),JTL(10),PRC(20),AW(20)#PBW(4)
C   ******************************************************************
      DATA (IDO=1H$)
      DATA (ICONJUN=3HAND,3HBUT,2HOR,3HNOR,7HHOWEVER,2HAS,6HTHOUGH,2HIF,
     15HSINCE,7HBECAUSE,6HUNLESS)
      DATA (ISELF=1HI,2HME,2HIM,2HID,2HMY,3HIVE,6HMYSELF,3HILL)
      DATA (ISIMBOL=1H.,1H%,1H$,1H*,1H!,1H=#1H,,1H),1H>,1H%,1H+,1H/)
C   ******************************************************************
      NRUN=0
      JSAM=0
C     READ NAMES OF SPEAKERS - BLANK CARD FOR CONCORDANCE OF TEXT
C   ******************************************************************
    5 READ 260, IPER
      IF(EOF,60)230,6
C     READ THE FORMAT OF DATA
C   ******************************************************************
    6 READ 270,IFMT
C     READ TITLE CARD FOR EACH PAGE OF OUTPUT
C   ******************************************************************
      READ 235, ITITL
C     READ HEADER CONTROL CARD - 1ST COL = CODE FOR TYPE OF ANALYSIS
C   ******************************************************************
C         REST OF CARD = TITLE
C         ITAPE    BLANK=SENTENCE ANALYSIS
C                  1=FREQUENCY COUNTS OF  WORDS
C                  2=INDIVIDUAL WORD ANALYSIS = KEY WORDS
C                  3=CONCORDANCE - FREQ. COUNTS AND PHRASES FROM TEXT
C                    WITHOUT SPEAKERS.  IF COL.20-22 OF NEXT CARD ARE
C                    BLANK, CONCORDANCE IS OF ALL WORDS.  IF NON-BLANK,
C                    CONCORDANCE IS OF ONLY THOSE KEYWORDS SPECIFEID.
C                  4=SYNOPSIS
C                  5=PARS THE WORDS
C                  6=PARS ONLY NOUNS AND VERBS AND GET FREQUENCY COUNTS T
C                  7=INTERVIEW CONTENT ANALYSIS
C                  8=STYLE - TOUGH, SWEET, STUFFY
```

```
      C   ************************************************************************
          10 READ 275, ITAPE,IHDR
             IF (EOF,60)230,15
          15 IF(ITAPE.NE.7)GO TO 11
             PRINT 4000
             PRINT 4001
             PRINT 4002
             PRINT 4003
             PRINT 4004
             PRINT 4005
             PRINT 4006
             PRINT 4007
             PRINT 4008
             PRINT 4009
             PRINT 4010
             PRINT 4011
             PRINT 4012
             PRINT 4013
             PRINT 4014
             PRINT 4015
             PRINT 4016
             PRINT 4017
             PRINT 4018
             PRINT 4019
             PRINT 4020
             GO TO 12
          11 PRINT 240
             PRINT 245
             PRINT 250
          12 PRINT 276,ITAPE,IHDR
             PRINT 265,IPER
      276    FORMAT (1H1,I1,9A8,A7)
      C      INITIALIZE
      C   ************************************************************************
             DO 20 I=1000,4000,1000
          20 ICON1(I)=0
             NRUN=NRUN+1
             DO 25 J=1,4050
          25 ICT(J)=0
             DO 30 I=1,2
             NSWDS(I)=0
             IMARK(I)=1
             ITEST1(I)=0
             ITEST2(I)=0
             ITEST3(I)=0
             ITOTAL(I)=0
          30 IPON(I)=0
             INN(1)=0
             INN(2)=1200
             DO 35 K=1,4
             ITWD(K)=0
             MAX(K)=0
             MIN(K)=1000
             TWD(K)=0
             NEXC(K)=0
             NSTAT(K)=0
      NQUES(K)=0
      ICMBN(K)=0
      ICG(K)=0
      IAFF(K)=0
      IPS(K)=0
      ING(K)=0
      NEUT(K)=0
      MPN(K)=0
      MAC(K)=0
      NLR(K)=0
      IBW(K)=0
      PBW(K)=0.
      DO 36 I=1,3
      IPRS(I,K)=0
      ITNS(I,K)=0
      IPRO(I,K)=0
   36 CONTINUE
      DO 136 J=1,7
      ITTPC(J,K)=0
  136 CONTINUE
   35 CONTINUE
      DO 137 I=1,20
      ICOUN(I)=0
      PRC(I)=0.
      IW(I)=0
      AW(I)=0.
  137 CONTINUE
      DO 236 I=1,120
      DO 236 J=1,50
  236 ISPOT(I,J)=1H
      IX=0
      IY=0
      JY=0
      DO 2361 LI=1,3
      DO 2361 MI=1,3
      DO 2361 NI=1,8
      MAT1(LI,MI,NI)=0
      MAT2(LI,MI,NI)=0
 2361 CONTINUE
      IF (ITAPE.EQ.4) GO TO 190
      NPEOPLE=1
C  ************************************************************************
C       READ IN PROGRAM CONTROLS - CONTROL CARD 2
C  ************************************************************************
C       1      NPEOPLE      NO OF PEOPLE CONVERSING IN THIS DATA SAMPLE
C       2      IPR          1=PRINT INPUT TEXT, 0=DO NOT PRINT TEXT
C       3      ISYMBL       1=SYMBOLS ARE TO BE EXTRACTED FROM THIS CONVERS
C                           2=NOT EXTRACTED
C       4-6    IREPT        YES=REPEAT DATA FROM PREVIOUS DATA SAMPLE
C                           NO =NEW SET OF DATA
C       7      IPARENS      1=FORGET WHATS IN PARENTHESES
C                           2=INCLUDE THE WORD IN THE TABLE BUT NOT IN COUN
C                           3=INCLUDE THE WORD IN THE TABLE AND IN COUNTERS
C       9-10   NNN          NO OF PORTIONS FOR TEXT TO BE DIVIDED INTO
C      11-12   NCHAR        NO. OF CHARACTERS TO BE PICK UP ON A CARD(1-75)
C      13      ISQ          1=CALCULATE NUMBER OF SENTENCES AND QUESTIONS
```

```
C                          0=DO NOT CALCULATE NUMBER OF SENTENCES AND QUES
C      14       KEEP       1=KEEP KEY WORDS FROM PREVIOUS RUN(USE ONLY IF
C                          ITAPE=0)
C                          0=OTHERWISE
C      17-19    IKEY       NUMBER OF KEY WORDS FOR INDIVIDUAL WORD ANALYSIS
C                          (IF SENTENCE OR CLAUSE ANALYSIS IS USED,
C                          NUMBER OF NEGATIVE KEY WORDS)
C      20-22    IKEY2      FOR SENTENCEAND CLAUSE ANALYSIS ONLY - NUMBER
C                          OF POSITIVE KEY WORDS
C      23-25    IKEY3      FOR CLAUSE ANALYSIS, NUMBER OF COGNITIVE WORDS
C      26-28    IKEY4      FOR CLAUSE ANALYSIS ONLY, NUMBER OF KEY WORDS IN
C                          1ST TOPIC
C      29-31    IKEY5      2ND TOPIC
C      32-74    IKEY6      3RD TOPIC
C      35-37    IKEY7      4TH TOPIC
C      38-40    IKEY8      5TH TOPIC
C   *******************************************************************
C   *******************************************************************
      READ 280, NPEOPLE,IPR,ISYMBL,IREPT,IPARENS,ISEL,NNN,NCHAR,ISQ,
     1KEEP,IKEY,IKEY2,IKEY3,IKEY4,IKEY5,IKEY6,IKEY7,IKEY8,ITHR,IPUN
      PRINT 281,NPEOPLE,IPR,ISYMBL,IREPT,IPARENS,ISEL,NNN,NCHAR,ISQ,
     1KEEP,IKEY,IKEY2,IKEY3,IKEY4,IKEY5,IKEY6,IKEY7,IKEY8
281   FORMAT (1X,3I2,A3,6I2,2X,8I3)
      IF(ITAPE.EQ.7)READ 270,JJPR,JJTN,JJMODE,JJVAL,JJTP
      IF (KEEP.EQ.1)GO TO 32
C   READ NEGATIVE AFFECT WORDS
C   *******************************************************************
      IF (IKEY.EQ.0)GO TO 33
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(IKWD(1,I),IKWD(2,I),I=1,IKEY)
      PRINT 277,(IKWD(1,I),IKWD(2,I),I=1,IKEY)
      K1=IKEY+1
      K2=IKEY+IKEY2
C   READ POSITIVE AFFECT WORDS
C   *******************************************************************
      IF (ITAPE.NE.0.AND.ITAPE.NE.7)GO TO 33
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(IKWD(1,I),IKWD(2,I),I=K1,K2)
      PRINT 277,(IKWD(1,I),IKWD(2,I),I=K1,K2)
      IF (ITAPE.NE.7)GO TO 33
C   READ COGNITIVE WORDS
C   *******************************************************************
      READ 235,JTL
      PRINT 186,JTL
      READ 270,(ICOG(1,I),ICOG(2,I),I=1,IKEY3)
      PRINT 277,(ICOG(1,I),ICOG(2,I),I=1,IKEY3)
      KT(1)=IKEY4
      KT(2)=KT(1)+IKEY5
      KT(3)=KT(2)+IKEY6
      KT(4)=KT(3)+IKEY7
      KT(5)=KT(4)+IKEY8
C   READ TOPIC 1 WORDS
C   *******************************************************************
      IF (IKEY4.EQ.0)GO TO 33
```

```
          READ 235,JTL
          PRINT 186,JTL
          READ  270,(ITPWD(1,I),ITPWD(2,I),I=1,IKEY4)
          PRINT 277,(ITPWD(1,I),ITPWD(2,I),I=1,IKEY4)
          DO 21 I=2,5
          IF (KT(I).EQ.KT(I-1))GO TO 33
          KTT1=KT(I-1)+1
          KTT2=KT(I)
      C  READ TOPICS 2-5 WORDS
      C  *****************************************************************
          READ 235,JTL
          PRINT 186,JTL
          READ  270,(ITPWD(1,J),ITPWD(2,J),J=KTT1,KTT2)
          PRINT 277,(ITPWD(1,J),ITPWD(2,J),J=KTT1,KTT2)
      277  FORMAT (/(5(1X,2A8)))
      21   CONTINUE
          GO TO 33
      32   IF (IKEY.NE.0)GO TO 33
          PRINT 34
      34   FORMAT (* NEED NUMBER OF KEY WORDS EVEN WHEN KEY WORDS ARE USED FR
         1OM PREVIOUS RUN*)
          STOP
      33   PRINT 186,ITITL
          PRINT 285,IHDR
      C    CALL SUBROUTINE TO READ AND HANDLE THE DATA
      C  *****************************************************************
          CALL READIN (ISEL,NCHAR,LAST,IPR,IPARENS,KK,NPEOPLE)
          REWIND 20
          IF (ITAPE.EQ.5)GO TO 10
      C    LOOP FOR EACH PERSONS WORDS
      C  *****************************************************************
          DO 185 K=1,NPEOPLE
          IF (ITAPE.EQ.0) GO TO 64
          ISUM=0
      C    N= POSITION OF PERSONS 1ST WORD IN ARRAY
      C  *****************************************************************
          N=K*1000-999
      C    M= POSITION OF PERSONS LAST WORD IN ARRAY
      C  *****************************************************************
          M=ICON1(N+999)+N-1
          IF (NPEOPLE.EQ.1) M=ICON1(4000)
      C  COUNSELING INTERVIEW ANALYSIS JUMPS AHEAD TO PRINT
      C  *****************************************************************
          IF (ITAPE.EQ.7)GO TO 181
          IF (ITAPE.EQ.8)GO TO 226
          IF (IKEY.GT.0) GO TO 50
          MM=M-1
      C    SORT FOR PRELIMINARY ALPHABETICAL LIST
          DO 45 I=N,MM
          DO 45 J=I,MM
          IF (ICON1(I)-ICON1(J+1)) 45,45,40
        40 IWORDA=ICON1(J+1)
          ICON1(J+1)=ICON1(I)
          ICON1(I)=IWORDA
          IWORD=ICT(J+1)
          ICT(J+1)=ICT(I)
          ICT(I)=IWORD
       45 CONTINUE
       50 PRINT 285, ITITL
          PRINT 285, IHDR
          IF (NPEOPLE.EQ.1) PRINT 290
          IF (NPEOPLE.GT.1) PRINT 295, IPER(K)
          IF (IKEY.GT.0.AND.ITAPE.NE.3) GO TO 55
C         CALL SUBROUTINE FOR COMPLETING THE ALPHABETIZING OF THE LIST AND
C            PRINTING IT
          CALL ALF (N,M,K)
          LAST=K*2-1
          GO TO 165
C         REACH HERE WHEN HAVE KEYWORDS
       55 DO 60 JK=N,M
C         PRINT WORDS AND FREQUENCIES
       60 PRINT 300, ICON2(1,JK),ICON2(2,JK),ICT(JK)
          GO TO 165
C         PRINT OUT FOR SENTENCE ANALYSIS
 64       PRINT 186,ITITL
 186      FORMAT (1H1,10A8//)
          PRINT 285,IHDR
       65 PRINT 305, IPER(K)
          GO TO (70,75), K
C         M IS POSITION OF LAST WORD IN ARRAY OF SENTENCE WORDS FOR EACH PER
       70 M=ICON2(1,1200)
          IKK=0
          GO TO 80
       75 M=ICON2(1,4050)
          IKK=1200
C         N IS TOTAL NUMBER OF SENTENCES FOR SENT ANALYSIS
       80 N=(M-IKK)/10+1
          DO 85 I=1,N
          IK1=IKK+(I-1)*10+1
          IK2=IK1+ICT(IK1+2)
C         PRINT EACH SENTENCE
       85 PRINT 310, ICT(IK1),((ICON2(1,J),ICON2(2,J)),J=IK1,IK2)
          TOTAL=ITOTAL(K)
          TEST1=ITEST1(K)
          TEST2=ITEST2(K)
          TEST3=ITEST3(K)
          RATIO1=TEST1/TOTAL
          RATIO2=TEST2/TOTAL
          RATIO3=TEST3/TOTAL
C         PRINT NUMBER OF TYPES OF SENTENCES AND RATIOS OF EACH TYPE TO TOTA
          PRINT 186,ITITL
          PRINT 285,IHDR
          PRINT 315, ITEST1(K),ITOTAL(K)
          PRINT 320, RATIO1
          PRINT 325, ITEST2(K),ITOTAL(K)
          PRINT 330, RATIO2
          PRINT 335, ITEST3(K),ITOTAL(K)
          PRINT 340, RATIO3
C         DIVIDE TEXT INTO SECTIONS FOR EACH PERSON
          IQUART=ITOTAL(K)/NNN
          NNA=NNN-1
          DO 90 JK=1,NNA
```

```
   90 IQU(JK)=JK*IQUART
      IQU(NNN)=ITOTAL(K)
      IBEN=IKK+1
      IFIN=ICTN(K)
C     LOOP FOR EACH SECTION OF TEXT
      DO 140 IOP=1,NNN
      DO 95 JJ=IBEN,IFIN,10
      IF (ICT(JJ)-IQU(IOP)) 95,100,105
   95 CONTINUE
      IB1=IBEN+1
      IF1=IFIN+1
      GO TO 115
C     INTEGER OF 1ST WORD IN LAST SENTENCE OF EACH SECTION
  100 IQM=JJ
      GO TO 110
  105 IQM=JJ-10
  110 IB1=IBEN+1
      IF1=IQM+1
  115 MT1=0
      MT2=0
      MT3=0
C     FIND TYPE OF KEY WORDS IN EACH SENT IN SENT ANALYSIS
      DO 135 II=IB1,IF1,10
      GO TO (120,125,130,135), ICT(II)
C     SUM UP NUMBER OF SENTENCES OF EACH TYPE
  120 MT1=MT1+1
      GO TO 135
  125 MT2=MT2+1
      GO TO 135
  130 MT3=MT3+1
  135 CONTINUE
      IF (IOP.EQ.NNN) IQUART=ITOTAL(K)-IQUART*NNA
      QU=IQUART
      QRA1=MT1
      QRA2=MT2
      QRA3=MT3
      QRA1=QRA1/QU
      QRA2=QRA2/QU
      QRA3=QRA3/QU
      PRINT 345
      PRINT 345
      PRINT 350, IOP
      PRINT 355, MT1,IQUART,QRA1
      PRINT 360, MT2,IQUART,QRA2
      PRINT 365, MT3,IQUART,QRA3
      IBEN=IQM+10
  140 CONTINUE
      PRINT 141,NSWDS(K)
 141  FORMAT (///* TOTAL WORDS IN ENTIRE SESSION= *,I5)
C     END LOOP FOR EACH SECTION OF TEXT
      GO TO 185
  145 PRINT 370
      PRINT 415
      GO TO 185
  150 IF (WORDS(K).EQ.0.) GO TO 145
      SUM=ISUM
```

```
       IWD=WORDS(K)
       PRINT 375, ISUM,IWD
       CUM=BUM/WORDS(K)
       PRINT 380, CUM
C      WRITE UNIT 9 FOR SYNOPSIS DATA
  155  WRITE (9,385) (IHDR(III),III=1,2),ITAPE,ISUM,M,SUM,CUM,K
       IF (ISQ,EQ.0.OR.ITAPE.EQ.2) GO TO 160
C      COMPUTE AND PRINT TOTAL NUMBER OF SENTENCES AND RATIOS STATE/SEN
C         AND QUES/SEN
       NTOT=NSTAT(K)+NQUES(K)
       RSS=FLOATF(NSTAT(K))/FLOATF(NTOT)
       RQS=FLOATF(NQUES(K))/FLOATF(NTOT)
       RES=FLOATF(NEXC(K))/FLOATF(NTOT)
       PRINT 390, NTOT
       WRITE (6,395)NSTAT(K),NQUES(K),NEXC(K)
       WRITE (6,405)RSS,RQS,RES
  160  PRINT 415
       GO TO 185
C      REACH HERE AFTER PRINTING OUT WORDS AND FREQUENCIES
C      SUM UP TOTAL WORDS USED BY EACH PERSON
  165  DO 170 J=N,M
  170  ISUM=ISUM+ICT(J)
C      XM IS TOTAL DIFFERENT WORDS USED
       XM=M=N+1
       M=XM
       SUM=ISUM
       IF (IKEY,EQ,0) WORDS(K)=SUM
       SUM=XM/SUM
       IF (NPEOPLE,EQ.1) GO TO 180
       PRINT 420, ISUM,M,IPER(K)
       PRINT 430, SUM,IPER(K)
  175  IF (IKEY,GT,0) GO TO 150
       CUM=1,
       GO TO 155
  180  PRINT 425, ISUM,M
       PRINT 435, SUM
       GO TO 175
C  PRINT SUMMARIES FOR CLAUSE ANALYSIS
C  ***********************************************************************************
181    PRINT 415
       PRINT 285,ITITL
       PRINT 285,IHDR
       IF (NPEOPLE,GT.1)PRINT 182,IPER(K)
182    FORMAT (//* ANALYSIS FOR *,A8/)
       IXM=M-N+1
       TTR=FLOATF(IXM)/FLOATF(ITWD(K))
       AV=FLOATF(ITWD(K))/FLOATF(KNT(K))
       PRINT 183,KNT(K),AV,MIN(K),MAX(K)
183    FORMAT (* TOTAL CLAUSES=*,I5/* AVERAGE CLAUSE LENGTH=*,F6.2/
     1* SHORTEST CLAUSE=*,I5,* WORDS*/* LONGEST CLAUSE=*,I5,* WORDS*/)
       MKNT=KNT(1)+KNT(2)
       PRINT 9030,MKNT
 9030  FORMAT (* TOTAL CLAUSES IN THIS SEGMENT = *,I3)
       AKNT=(FLOATF(KNT(K))/FLOATF(MKNT))*100.
       PRINT 9031,AKNT
 9031  FORMAT (* PERCENT OF CLAUSES CONTRIBUTED = *,F4.0)
```

```
          ANLR=FLOATF(NLR(K))/FLOATF(ITWD(K))
          PRINT 184,ITWD(K),IXM,TTR,ANLR
  184     FORMAT (/* TOTAL WORDS=*,I5/* NO. DIFFERENT WORDS=*,I5/
         1* TYPE/TOKEN RATIO=*,F5.2/* AVE. WORD LENGTH = *,F5.2/)
          MTWD=ITWD(1)*ITWD(2)
          PRINT 9032,MTWD
     9032 FORMAT (* TOTAL WORDS IN THIS SEGMENT = *,I4 )
          ATWD=(FLOATF(ITWD(K))/FLOATF(MTWD))*100.
          PRINT 9033, ATWD
     9033 FORMAT (* PERCENT OF WORDS CONTRIBUTED = *,F4.0)
          PBW(K)=(FLOATF(IBW(K))/FLOATF(ITWD(K)))*100.
          PRINT 9066,PBW(K)
     9066 FORMAT(* PERCENT OF WORDS OVER 5 LETTERS = *,F3.0/)
          ANT=KNT(K)
          DO 197 I=1,3
          RAT(I)=(FLOATF(IPRS(I,K))/ANT)*100.
      197 RRAT(I)=(FLOATF(ITNS(I,K))/ANT)*100.
          PRINT 9000
     9000 FORMAT (* PERSON OF SUBJECT */)
          PRINT9001,(I,IPRS(I,K),RAT(I),I=1,3)
     9001 FORMAT (* PERSON*,I2,1X,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9002
     9002 FORMAT (/* TENSE OF VERB */)
          PRINT 9003,ITNS(1,K),RRAT(1)
     9003 FORMAT (* PAST *,19(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9004,ITNS(2,K),RRAT(2)
     9004 FORMAT (* PRESENT *,16(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9005,ITNS(3,K),RRAT(3)
     9005 FORMAT (* FUTURE *,17(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9006
     9006 FORMAT (/* MODE */)
          CG=FLOATF(ICG(K))/ANT
          CG=CG*100.
          EUT=(FLOATF(NEUT(K))/ANT)*100.
          PRINT 9007,NEUT(K),EUT
     9007 FORMAT (* NEUTRAL *,16(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9008,ICG(K),CG
     9008 FORMAT (* COGNITIVE *,14(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          AFF=FLOATF(IAFF(K))/ANT
          AFF=AFF*100.
          PRINT 9009,IAFF(K),AFF
     9009 FORMAT (* AFFECTIVE *,14(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PMAC=(FLOATF(MAC(K))/ANT)*100.
          PRINT 906,MAC(K),PMAC
      906 FORMAT (* MIXED *,18(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PRINT 9010
     9010 FORMAT (/* VALENCE OF AFFECT */)
          PIPS=(FLOATF(IPS(K))/ANT)*100.
          PRINT 9011,IPS(K),PIPS
     9011 FORMAT (* POSITIVE *,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PING=(FLOATF(ING(K))/ANT)*100.
          PRINT 9012,ING(K),PING
     9012 FORMAT (* NEGATIVE *,15(1H.),I3,1X,9(1H.),F4.0,* PERCENT*)
          PMPN=(FLOATF(MPN(K))/ANT)*100.
          PRINT 906, MPN(K),PMPN
          PRINT 9013
```

```
9013 FORMAT(/* TOPIC */)
     PIT1=(FLOATF(ITTPC(1,K))/ANT)*100.
     PRINT 9014,ITTPC(1,K),PIT1
9014 FORMAT (* SCHOOL REFERENCES *,6(1H,),I3,1X,9(1H,),F4.0,* PERCENT*)
     PIT2=(FLOATF(ITTPC(2,K))/ANT)*100.
     PRINT 9015,ITTPC(2,K),PIT2
9015 FORMAT (* FAMILY REFERENCES *,6(1H,),I3,1X,9(1H,),F4.0,* PERCENT*)
     PIT3=(FLOATF(ICMBN(K))/ANT)*100.
     PRINT 9016,ICMBN(K),PIT3
9016 FORMAT (* COMBINATION *,12(1H,),I3,1X,9(1H,),F4.0,* PERCENT*)
     IF(IPUN,NE.1)GO TO 1984
     PUNCH 270, IHDR
     PUNCH 1970, IPER(K),AV,AKNT,TTR,ANLR,ATWD,PBW(K),RAT(1),RAT(2),RAT
    1(3),RRAT(1),RRAT(2),RRAT(3),EUT,CG,AFF,PMAC,PIPS,PING,PMPN,PIT1,PI
    2T2,PIT3
1970 FORMAT(1H1,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
1984 IF(K,EQ,2)CALL SUMMARY(MAT2,IPER,K,IHDR,IPUN)
     IF (K,EQ,2)GO TO 185
     PRINT 9051,IPER(K)
9051 FORMAT (1H1,/////,* RESPONSE TYPE SUMMARY FOR *,A8/)
     DO 9050 KK=1,14
     PRC(KK)=(FLOATF(ICOUN(KK))/ANT)*100.
     AW(KK)=FLOATF(IW(KK))/FLOATF(ICOUN(KK))
9050  CONTINUE
     IF(IPUN,NE.1)GO TO 1985
     PUNCH 1971,     IPER(K),(PRC(I),I=1,14)
1971 FORMAT(1H5,A8,14F2.0)
     PUNCH 1972,     IPER(K),(AW(I),I=1,14)
1972 FORMAT(1H6,A8,14F5.2)
1985 PRINT 9052,ICOUN(1),PRC(1),AW(1)
9052 FORMAT (* MINIMUM SOCIAL STIMULI ..... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9053,ICOUN(2),PRC(2),AW(2)
9053 FORMAT (* ACCENT ...................... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9054,ICOUN(3),PRC(3),AW(3)
9054 FORMAT (* RESTATEMENT ................. *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9055,ICOUN(4),PRC(4),AW(4)
9055 FORMAT (* REFLECTION - SIMPLE ......... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9056,ICOUN(5),PRC(5),AW(5)
9056 FORMAT (* REFLECTION - CONFRONTING ... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9057,ICOUN(6),PRC(6),AW(6)
9057 FORMAT (* REFLECTION - CAUSATION ..... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9058,ICOUN(7),PRC(7),AW(7)
9058 FORMAT (* INFORMATIONAL ............... *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9059,ICOUN(8),PRC(8),AW(8)
9059 FORMAT (* IMPERATIVE .................. *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
     PRINT 9060,ICOUN(9),PRC(9),AW(9)
9060 FORMAT (* PROBE - SIMPLE .............. *,I3,* ........... *,F4.0,*
   1 PERCENT *,10(1H,),1X,F5.2,* WORDS PER RESPONSE*)
```

```
      PRINT 9061,ICOUN(10),PRC(10),AW(10)
 9061 FORMAT (* PROBE = RHETORICAL .......... *,I3,* ............ *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9062,ICOUN(11),PRC(11),AW(11)
 9062 FORMAT (* ABILITY POTENTIAL .......... *,I3,* ............ *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9063,ICOUN(12),PRC(12),AW(12)
 9063 FORMAT (* SELF REFERENCE ............. *,I3,* ............ *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9064,ICOUN(13),PRC(13),AW(13)
 9064 FORMAT (* JOINT IMPERATIVE ........... *,I3,* ............ *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9065,ICOUN(14),PRC(14),AW(14)
 9065 FORMAT(* THIRD PERSON INFORMATION ... * ,I3,* ............ *,F4.0,*
     1 PERCENT *,10(1H.),1X,F5.2,* WORDS PER RESPONSE*)
      PRINT 9017
 9017 FORMAT (1H1,46X,*CUMULATIVE RECORD OF SELECTED CLIENT RESPONSES*)
      DO 600 J=1,50
      JJ=50-J+1
      IF(XMODF(JJ,10).EQ.0)GO TO 601
      PRINT 9018,(ISPOT(I,JJ),I=1,120)
 9018 FORMAT (2H *,120A1)
      GO TO 600
  601 NM=JJ/10
      PRINT 9019,NM,(ISPOT(I,JJ),I=1,120)
 9019 FORMAT (1X,I1,120A1)
  600 CONTINUE
      PRINT 9020
 9020 FORMAT(1X,*0*,9(1H*),*1*,9(1H*),*2*,9(1H*),*3*,9(1H*),*4*,9(1H*),
     1*5*,9(1H*),*6*,9(1H*),*7*,9(1H*),*8*,9(1H*),*9*,8(1H*),*10*,8(1H*)
     2,*11*,8(1H*),*12*)
      PRINT 9021
 9021 FORMAT (/10X,*CLIENT RESPONSE CHARACTERISTICS*,20X,*KEY TO COUNSEL
     1OR RESPONSES*)
      PRINT 7001,JJPR
      PRINT 7002,JJTN
      PRINT 7003,JJMODE
      PRINT 7004,JJVAL
      PRINT 7005,JJTP
      PRINT 7006
      PRINT 7007, IPER(1),IPER(2)
      PRINT 7008
      SLP=FLOATF(IY)/FLOATF(IX)
      PRINT 7009,SLP
 7001 FORMAT(15X,*PERSON  = *,A8,29X,*A = MINIMUM SOCIAL STIMULUS   F =
     1REFLECTION - CAUSATIVE*)
 7002 FORMAT(15X,*TENSE   = *,A8,29X,*B = ACCENT*,20X,*G = INFORMATIONAL
     1*)
 7003 FORMAT(15X,*MODE    = *,A8,29X,*C = RESTATEMENT*,15X,*H = IMPERATI
     1VE*)
 7004 FORMAT(15X,*VALENCE = *,A8,29X,*D = REFLECTION - SIMPLE*,7X,*I = P
     1ROBE - SIMPLE*)
 7005 FORMAT(15X,*TOPIC   = *,A8,29X,*E = REFLECTION - CONFRONTING  J =
     1PROBE - RHETORICAL*)
 7006 FORMAT(76X,*K = ABILITY POTENTIAL*)
 7007 FORMAT(15X,A8,* / *,A8,42X,*L = SELF REFERENCE*)
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      7008 FORMAT(76X,*M = JOINT IMPERATIVE*)
      7009 FORMAT(15X,*SLOPE = *,F5.3,48X,*N = THIRD PERSON INFORMATION*)
      4000 FORMAT(1H1//////36X,*THE AUTOMATED ANALYSIS OF COUNSELOR STYLE AND
          1 EFFECTS*////)
      4001 FORMAT(38X,*PRINCIPAL INVESTIGATOR - DR. EDWARD W. PEPYNE*)
      4002 FORMAT(63X,*COLLEGE OF EDUCATION*)
      4003 FORMAT(63X,*UNIVERSITY OF HARTFORD*/)
      4004 FORMAT(38X,*RESEARCH ASSOCIATES    - MS. KATHLEEN H. COWLES*)
      4005 FORMAT(63X,*RESEARCH COMPUTING CENTER*)
      4006 FORMAT(63X,*UNIVERSITY OF MASSACHUSETTS*/)
      4007 FORMAT(63X,*MS. CAROL J. PEPYNE*)
      4008 FORMAT(63X,*COLLEGE OF EDUCATION*)
      4009 FORMAT(63X,*UNIVERSITY OF HARTFORD*/)
      4010 FORMAT(38X,*PROGRAMMING  ASSISTANT - MS. KATHERINE PARANYA*)
      4011 FORMAT(63X,*RESEARCH COMPUTING CENTER*)
      4012 FORMAT(63X,*UNIVERSITY OF MASSACHUSETTS*///)
      4013 FORMAT(26X,*DEVELOPED AT THE RESEARCH COMPUTING CENTER OF THE UNIV
          1ERSITY OF MASSACHUSETTS*)
      4014 FORMAT(29X,*SUPPORTED IN PART BY THE USOE, DEPT. OF HEALTH, EDUCAT
          1ION, AND WELFARE*/)
      4015 FORMAT(55X,*PROJECT NO. 1-A-067*)
      4016 FORMAT(55X,*GRANT NO. OEG-1-72-0005(509)*)
      4017 FORMAT(55X,*OE-001422 NO. NIH 473622*)
      4018 FORMAT(/////5X,*ACKNOWLEDGEMENT IS HEREBY GRANTED TO EARLIER CONTE
          1NT ANALYSIS PROGRAMS GUIDED BY DR. JULES M. ZIMMER, SCHOOL OF EDUC
          1ATION,*)
      4019 FORMAT(7X,*UNIVERSITY OF CALIFORNIA AT SANTA BARBARA, WHICH HAVE F
          1ACILITATED THE DEVELOPMENT AND IMPLIMENTATION OF THIS PROGRAM.*)
      4020 FORMAT(/////59X,*JANUARY 1973*)
           IF(K.EQ.1)CALL SUMMARY(MAT1,IPER,K,IHDR,IPUN)
       185 CONTINUE
     C     END OF PRINTING LOOP FOR EACH PERSON
           IF(ITHR.EQ.3HDIF)GO TO 5
           GO TO 10
     C  COUNSELING INTERVIEW ANALYSIS LOOP ENDS HERE
     C  ********************************************************************
     C  ********************************************************************
     C     REACH HERE FOR SYNOPSIS
     190   PRINT 186,ITITL
           PRINT 285,IHDR
           KUNIT=LAST-(2*NPEOPLE-2)
     C     READ AND PRINT SUMMARIES FOR EACH PERSON
           DO 225 K=1,NPEOPLE
           REWIND 9
           PRINT 415
           PRINT 285, ITITL
           PRINT 285, IHDR
           PRINT 440, IPER(K)
           PRINT 445
       195 READ (9,385) IHD,JHD,ITAPE,ISUM,M,SUM,CUM,JPERS
           IF (EOF,9) 205,200
       200 IF (JPERS.EQ.K) PRINT 385, IHD,JHD,ITAPE,ISUM,M,SUM,CUM
           GO TO 195
       205 REWIND 9
           PRINT 450, IPER(K)
       210 READ (KUNIT) ICON1(1),ICNT,ITG
      IF (EOF,KUNIT) 220,215
C     PRINT OUT RESIDUAL WORD LIST
  215 IF (ITG,GT.0) GO TO 210
      PRINT 300, ICON2(1,1),ICON2(2,1),ICNT
      GO TO 210
  220 REWIND KUNIT
      KUNIT=KUNIT+2
  225 CONTINUE
      GO TO 10
C  REACH HERE FOR STYLE - TOUGH, SWEET, STUFFY PRINT OUT
226   PRINT 186,ITITL
      PRINT 285,IHDR
      PRINT 285,IPER(K)
      ICONJ=0
      ITHE=0
      IPREP=0
      NIF=0
      DO 511 I=N,M
      IF (ICON2(1,I).EQ.2HIN.OR.ICON2(1,I).EQ.2HOF.OR.ICON2(1,I).EQ.3HFO
     1R) IPREP=IPREP+ICT(I)
      IF (ICON2(1,I).EQ.2HIF) NIF=NIF+ICT(I)
      IF (ICON2(1,I).EQ.3HTHE)ITHE=ITHE+ICT(I)
      IF (ICON2(1,I).EQ.3HAND.OR.ICON2(1,I).EQ.3HBUT)ICONJ=ICONJ+ICT(I)
      ISUM=ISUM+ICT(I)
511   CONTINUE
      CON=ISUM
      RRPR=0,
      TO=0,
      SW=0,
      ST=0,
C  ALNGTH = AVE. WD. LENGTH
      ALNGTH=FLOATF(NLET(K))/CON
      IF (ALNGTH.LT.5,5)TO=TO+1,
      IF (ALNGTH.GE.5,5.AND.ALNGTH.LE.6,0)SW=SW+1,
      IF (ALNGTH.GT.6,0)ST=ST+1,
C  NUMBER OF THE-S
505   RTHE=FLOATF(ITHE   )/CON
      IF (RTHE.LT.,05 )GO TO 506
      ST=ST+,5
      TO=TO+,5
      GO TO 507
506   SW=SW+1,
C  SENTENCE MAKEUP
507   ITSS=NSTAT(K)+NQUES(K)+NEXC(K)
      TSS=ITSS
      RSS=FLOATF(NSTAT(K))/TSS
      RQS=FLOATF(NQUES(K))/TSS
      RES=FLOATF(NEXC(K))/TSS


      IF ((RQS+RES).GT.0.)GO TO 508
      ST=ST+1,
      GO TO 509
508   SW=SW+,5
      TO=TO+,5
509   DO 227 I=1,2
```

```
      RRPR=RRPR+IPRO(I,K)
227   RPRO(I)=FLOATF(IPRO(I,K))/CON
C  PERSONAL PRONOUN MAKEUP
      IF (RPRO(1),GT,,017)GO TO 528
      SW=SW+,5
      ST=ST+,5
      GO TO 529
528   TO=TO+1,
529   IF (RPRO(2),GT,,03)GO TO 530
      TO=TO+,5
      ST=ST+,5
      GO TO 513
530   SW=SW+1,
C  ASENT = AVE, SENTENCE LENGTH
513   ASENT=CON/TSS
      IF (ASENT,LT,20,)GO TO 514
      ST=ST+,5
      TO=TO+,5
      GO TO 515
514   SW=SW+1,
C  NUMBER OF PREPS
515   RPRN=FLOATF(IPREP  )/CON
C  NUMBER OF CONJUNCTIONS
      RCNJ=FLOATF(ICONJ  )/CON
C  NUMBER OF IF-S
      RIF=FLOATF(NIF)/CON
      IF (RPRN,GE,,10)GO TO 516
      SW=SW+,5
      TO=TO+,5
      GO TO 517
516   ST=ST+1,
517   IF (RCNJ,GT,,04)GO TO 501
      SW=SW+,5
      ST=ST+,5
      GO TO 502
501   TO=TO+1,
502   IF (RIF,GE,,008)GO TO 503
      SW=SW+,5
      ST=ST+,5
      GO TO 504
503   TO=TO+1,
C  TYPE TOKEN RATIO
504   JSUM=M-N+1
      TTR=FLOATF(JSUM)/CON
      IF (TTR,LT,,48)TO=TO+1.
      IF (TTR,GT,,52)SW=SW+1.
      IF (TTR,GE,,48.AND.TTR.LE,.52)ST=ST+1.
      PRINT 228,ISUM,JSUM,TTR,ALNGTH,ASENT,(I,IPRO(I,K),RPRO(I),I=1,2)
      PRINT 394,7HAND/BUT,1H ,ICONJ,RCNJ,5HTHE-S,1H ,ITHE,RTHE,8HIN/OF/F
     10,1HR,IPREP,RPRN,4HIF-S,1H ,NIF,RIF
394   FORMAT (* NO, *,A8,A1,*=*,I4,* RATIO/TOTAL WDS=*,F7,4)
228   FORMAT (* TOTAL NUMBER OF WDS=*,I5/* TOTAL NO, DIFFERENT WDS,=*,I5
     1/* TYPE/TOKEN RATIO =*,F7,4,/* AVE, WD, LENGTH=*,F5,2/
     1* AVERAGE SENTENCE LENGTH=*,F6,2 /2(* NO,*,I2,* PERSON PRONOUNS=*,
     3I5,* RATIO TO TOTAL WDS=*,F7,4/))
      WRITE(6,395)NSTAT(K),NQUES(K),NEXC(K)
```

```
          WRITE (6,405)RSS,ROS,RES
          TO=TO/7.5
          SW=SW/7.5
          ST=ST/7.
          WRITE (6,393)TO,SW,ST
  393     FORMAT (/* TOUGH , SWEET , STUFFY COUNT =*,3F5.2)
          GO TO 185
  230     STOP
  C
  C
    235 FORMAT (10A8)
    240 FORMAT (/////,112H     CONTENT ANALYSIS PROGRAM DESIGNED AND IMPLE
       1MENTED AT THE RESEARCH COMPUTING CENTER, UNIV. OF MASSACHUSETTS )
    245 FORMAT (113H      UNDER THE GUIDANCE OF DR JULES ZIMMER, SCHOOL OF E
       1DUCATION BY KATHLEEN H. COWLES, ASSISTANT TO THE DIRECTOR, )
    250 FORMAT (27X,58H NANCY LEE, LINDA MAO, AND KATHARINE PARANYA, PROGR
       1AMMERS ,/////)
    255 FORMAT (I2)
    260 FORMAT (4A8)
    265 FORMAT (1X,8A8)
    270 FORMAT (10A8)
    275 FORMAT (I1,9A8,A7)
    280 FORMAT (3I1,A3,2I1,2I2,2I1,2X,8I3,4X,A3,2X,I1)
  285     FORMAT (1X,10A8//)
    290 FORMAT (36H WORDS IN TEXT AND THEIR FREQUENCIES,/)
    295 FORMAT (21H  THE WORDS USED BY  ,A8,37H AND THEIR FREQUENCIES ARE
       1AS FOLLOWS)
    300 FORMAT (15X,2A8,12X,I8)
    305 FORMAT (24H  THE SENTENCES USED BY ,A8)
    310 FORMAT (1H0,I8,5(2X,2A8),(/9X,5(2X,2A8)))
    315 FORMAT (39H THE NO. OF SELF-POSITIVE SENTENCES ARE,I8,27H  THE TOT
       1AL  SENTENCES ARE ,I8/)
    320 FORMAT (/,56H  RATIO OF SELF-POSITIVE SENTENCES TO TOTAL SENTENCES
       1 IS,F5.2/)
    325 FORMAT (/,40H  THE NO. OF SELF-NEGATIVE SENTENCES ARE,I8,25H  THE
       1TOTAL SENTENCES ARE,I8/)
    330 FORMAT (/,56H  RATIO OF SELF-NEGATIVE SENTENCES TO TOTAL SENTENCES
       1 IS,F5.2/)
    335 FORMAT (/,49H  THE NO. OF SELF-POSITIVE-NEGATIVE SENTENCES ARE,I8,
       125H  THE TOTAL SENTENCES ARE,I8/)
    340 FORMAT (/,65H  RATIO OF SELF-POSITIVE-NEGATIVE SENTENCES TO TOTAL
       1SENTENCES IS,F5.2/)
    345 FORMAT (1X,20H********************)
    350 FORMAT (/,25H  THE RATIO FOR SESSION  ,I1/)
    355 FORMAT (/,15H SELF-POSITIVE=,I4,8H  TOTAL=,I4,8H  RATIO=,F5.2/)
    360 FORMAT (/,16H  SELF-NEGATIVE=,I4,8H  TOTAL=,I4,8H  RATIO=,F5.2/)
    365 FORMAT (/,25H  SELF-POSITIVE-NEGATIVE=,I4,8H  TOTAL=,I4,8H  RATIO=
       1,F5.2/)
    370 FORMAT (/,82H   CALCULATE THE TOTAL WORDS IN THE SESSION FIRST,
       1     PLEASE....................../)
    375 FORMAT (/,29H  TOTAL WORDS IN CATEGORY ARE,I8,28H TOTAL WORDS IN S
       1ESSION ARE ,I8/)
    380 FORMAT (/,55H  TOTAL WORDS IN CATEGORY PER TOTAL WORDS IN SESSION
       1IS,F5.2/)
    385 FORMAT (1X,2A8,2X,I2,5X,I8,2X,I8,10X,F10.2,18X,F10.2,1X,I1)
    390 FORMAT (//,28H TOTAL NUMBER OF SENTENCES =,I5)
```

```
395 FORMAT (23H NUMBER OF STATEMENTS =,I5/
   1* NUMBER OF QUESTIONS =*,I5/* NUMBER OF EXCLAMATIONS =*,I5)
400 FORMAT (22H NUMBER OF QUESTIONS =,I5)
405 FORMAT (31H RATIO (STATEMENTS/SENTENCES) =,F5.2/
   1* RATIO (QUESTIONS/SENTENCES) =*,F5.2/* RATIO (EXCLAMATION/SENTENC
   2ES) =*,F5.2)
410 FORMAT (30H RATIO (QUESTIONS/SENTENCES) =,F5.2)
415 FORMAT (1H1)
420 FORMAT (1X,12HTOKENS ARE  ,I8,16H AND TYPES ARE  ,I8,7H  FOR  ,A8)
425 FORMAT (1X,12HTOKENS ARE  ,I8,16H AND TYPES ARE  ,I8)
430 FORMAT (23H0 TYPE TOKEN RATIO IS  ,F5.2,  5H FOR ,A8)
435 FORMAT (23H0 TYPE TOKEN RATIO IS  ,F5.2)
440 FORMAT (18H   SYNOPSIS FOR   ,A8//)
445 FORMAT (7X,5HTITLE,5X,6HNUMBER,5X,6HTOKENS,5X,5HTYPES,5X,19HRATIO(
   1TYPES/TOKENS),2X,26HRATIO(TOKENS/TOTAL TOKENS),/)
450 FORMAT (10(/),37H WORDS AND THEIR FREQUENCIES USED BY ,A8,25H WHIC
   1H WERE NOT KEYWORDS )
    END
```

```
      SUBROUTINE READIN (ISEL,NCHAR,LAST,IPB,IPARENS,KK,NPEOPLE)
      EQUIVALENCE (ICO,IIWORD),(ITPWD,ITPW)
      EQUIVALENCE (ICON1,ICON2)
      EQUIVALENCE (ISPKW,IKWD)
      EQUIVALENCE (ICLZ2,ICLZ)
      DOUBLE PRECISION ICON1,ICO,IWORDA,ISPKW,ICLZ
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),ITWD(4)
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/4/IJJ(200)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(200),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000)
      COMMON /B/ IPART(20),IDESC(101,2)
      COMMON/D/IPERPRON(8)
      COMMON/10/NLET(4),IPRO(3,4)
      DIMENSION IIWORD(2),IPRON(25)
C     ************************************************************************
      DATA (IPRON=1HI,2HME,2HMY,4HMINE,3HI=M,6HMYSELF,4HI=VE,3HI=D,
     13HYOU,4HYOUR,6HYOU-RE,6HYOU=VE,8HYOURSELF,5HYOU=D,5HYOURS)
C     ************************************************************************
C     INITIALIZE
      DO 4 I=1,4
      KNT(I)=0
4     NLET(I)=0
      NSENT=0
      ICPAR=0
C     READ DATA FROM UNIT 12
C     ************************************************************************
      L=12
      NCON=0
      IPRN=0
      IJ=1
      ISW=1
      ISY=0
      IERR=1
      ICZ=0
      IKP=0
      NSELF=0
      NPOSIT=0
      NEGAT=0
      ISN=0
      IRP=1H)
      ILP=1H(
      ILINE=0
      IF (IKEY.EQ.0) GO TO 15
      JKY=IKEY
      LKY=JKY-1
      DO 10 I=1,JKY
      DO 10 J=I,LKY
      IF (ISPKW(I)-ISPKW(J+1)) 10,10,5
    5 IWORDA=ISPKW(I)
      ISPKW(I)=ISPKW(J+1)
      ISPKW(J+1)=IWORDA
   10 CONTINUE
```

```
C     IF REPEATING DATA FROM PREVIOUS SAMPLE  GO READ FROM UNIT 10
C     ******************************************************************
   15 IF (IREPT-3HYES) 25,230,25
   20 IF (ITAPE.EQ.2) GO TO 185
   25 K=0
C     READ A LINE OF TEXT
C     ******************************************************************
      READ (L,IFMT) ISEQ,(IJJ(J),J=1,NCHAR)
      ILINE=ILINE+1
      IF (EOF,L) 240,30
   30 IF (IREPT.EQ.3HYES) GO TO 35
C     FOR NEW DATA SAMPLE WRITE LINE OUT ON UNIT 10
C     ******************************************************************
      WRITE (10,IFMT) ISEQ,(IJJ(J),J=1,NCHAR)
   35 IF(IPR.NE.1)GO TO 45
C     IF SPECIFIED, PRINT TEXT OUT
C     ******************************************************************
   40 PRINT 250, ISEQ,(IJJ(J),J=1,NCHAR)
C     LOOP FOR EACH CHARACTER IN LINE
C     ******************************************************************
C     ******************************************************************
   45 DO 235 I=1,NCHAR
      K=K+1
      IF (IJJ(I).EQ.1H/.AND.NPEOPLE.GT.1) GO TO 55
C     WHEN AFTER 16 CHARACTRS AFTER 1ST SLASH HAVE NOT HIT END OF
C        SPEAKERS NAME, LEAVE THE LOOP.
C     ******************************************************************
      IF ((ISW.EQ.2).AND.(K.EQ.16)) GO TO 75
C     BLANK INDICATES END OF A WORD
      IF (IJJ(I).EQ.1H ) GO TO 145
C     LEFT PARENTHESIS
      IF (IJJ(I).EQ.ILP) GO TO 150
C     RIGHT PARENTHESIS
      IF (IJJ(I).EQ.IRP) GO TO 165
C     CHECK FOR SYMBOL
      DO 50 J=1,30
      IF (IJJ(I).EQ.ISIMBOL(J)) GO TO 140
   50 CONTINUE
      IF (I.EQ.NCHAR) GO TO 145
      GO TO 235
C     AT BEGINNING OF NAME,ISW=1 , AT END OF NAME,ISW=2
C     ******************************************************************
   55 GO TO (85,60), ISW
C     REACH HERE AFTER SECOND SLASH SEPARATING SPEAKERS NAME
C     ******************************************************************
   60 IJJ(I)=1H
C     ENCODE NAME
C     ******************************************************************
      CALL ENCDE (K,ICO,I)
      ICON1(4049)=ICO
      DO 65 J=1,4
C     FIND WHICH PERSON IS NEW SPEAKER
C     ******************************************************************
      IF (ICON2(1,4049).EQ.IPER(J)) GO TO 80
   65 CONTINUE
C     ERROR MESSAGE WHEN SPEAKER NOT FOUND IN LIST OF POSSIBLE SPEAKERS
```

```
C  **********************************************************************
      PRINT IFMT, (IJJ(J),J=1,NCHAR)
      PRINT 265, ICON2(1,4049),IPER(1),IPER(2),IPER(3),IPER(4)
C     SET ERROR SWITCH
C  **********************************************************************
   70 IERR=2
      ISW=1
      GO TO 235
C     REACH HERE WHEN HAVE PROCESSED 16 CHARS AFTER FIRST SLASH FOR
C         SPEAKERS NAME AND STILL HAVE NOT HIT END OF NAME - ERROR CONDIT
C     ENCODE THE 16 CHARS HAVE
C  **********************************************************************
   75 CALL ENCDE (K,ICO,I)
      ICON1(4049)=ICO
C     PRINT ERROR MESSAGE AND IGNORE REST OF THIS SPEAKERS CONVRSATION
C  **********************************************************************
      PRINT 270, ICON2(1,4049),ICON2(2,4049)
      PRINT IFMT, (IJJ(J),J=1,NCHAR)
      GO TO 70
C     INITIALIZE AFTER FIND A NEW PERSON SPEAKING
C  **********************************************************************
   80 IJ=J
      ISW=1
      GO TO 235
C     REACH HERE AFTER FIRST SLASH SEPARATING SPEAKERS NAME
C  **********************************************************************
   85 K=0
      ICO=0
      IF (ITAPE.EQ.7)ICZ=1
      ISW=2
      IERR=1
      INDD=I-1
      IF (ITAPE.EQ.7)CALL CLAUSE(I,ICZ,IJ)
      GO TO 235
89    IPRN=1
C     REACH HERE FOR EACH WORD
C  **********************************************************************
C     ENCODE THE WORD
C  **********************************************************************
90    KS=K
      CALL ENCDE (K,ICO,I)
      IF (IIWORD(1).EQ.1H ) GO TO 235
92    ITA=ITAPE+1
C  FOR INTERVIEW CONTENT ANALYSIS JUMP AHEAD
C  **********************************************************************
      GO TO (225,115,115,95,115,125,125,119,134),ITA
C     COUNTER FOR UP TO 100 WORDS IN A CLAUSE
   95 IF (IKP.NE.100) IKP=IKP+1
C     ADD WORD ONTO CLAUSE
      ICLZ(IKP)=ICO
      IF (ICZ.NE.1) GO TO 115
      ICZ=0
      DO 110 KP=1,IKP
      IF (IKEY.EQ.0) GO TO 105
      DO 100 KQ=1,IKEY
      IF (ICLZ(KP)-ISPKW(KQ)) 110,105,100
   100 CONTINUE
       GO TO 110
   105 WRITE (20) ICLZ(KP),IKP,(ICLZ(JKP),JKP=1,IKP),ISEQ
   110 CONTINUE
       IKP=0
   115 CALL NEWORD (IJ,I,NPEOPLE,ICO,1)
       GO TO 235
C  REACH HERE FOR CLAUSES
C  **********************************************************************
C  **********************************************************************
119    IF(ICZ.EQ.0)GO TO 120
       CALL ENDING(ICO,JJ)
       CALL PART(1,JJ-1,ICO)
       II=0
       CALL CLAUSE(I-1,II,IJ)
       CALL PART(JJ,JJ,ICO)
   120 CALL CLAUSE (I,ICZ,IJ)
121    FORMAT (3I6)
       IF (IPRN.EQ.1.AND.IPARENS.EQ.2)GO TO 234
       IF (IIWORD(1).EQ.1H..OR.IIWORD(1).EQ.1H,.OR.IIWORD(1).EQ.1H$.OR.
     1IIWORD(1).EQ.  ISIMBOL(2))GO TO 235
       CALL NEWORD(IJ,I,NPEOPLE,ICO,1)
       GO TO 235
   125 IF (IKP.NE.100) IKP=IKP+1
       NCON=NCON+1
       ICLZ(IKP)=ICO
       IF (ICZ.EQ.0)GO TO 235
       ICZ=0
       CALL PARS
       IF (ITA.NE.7)GO TO 135
126    DO 130 KK=1,IKP
       IF (IPART(IDESC(KK,1)).NE.4HNOUN.AND.IPART(IDESC(KK,1)).NE.4HVERB)
     1 GO TO 130
       CALL NEWORD (IJ,I,NPEOPLE,ICLZ(KK),1)
   130 CONTINUE
   135 IKP=0
       GO TO 235
C  END OF INTERVIEW CONTENT ANALYSIS WORK
C  **********************************************************************
C  REACH HERE FOR STYLE - TOUGH, SWEET, STUFFY
134    CALL NEWORD(IJ,I,NPEOPLE,ICO,1)
136    NLET(IJ)=NLET(IJ)+KS
336    DO 337 KK=1,15
       IF (IIWORD(1).EQ.IPRON(KK))GO TO 338
337    CONTINUE
       GO TO 235
338    IF (KK .LE.8)IPRO(1,IJ)=IPRO(1,IJ)+1
       IF (KK.GT.8)              IPRO(2,IJ)=IPRO(2,IJ)+1
       GO TO 235
C      REACH HERE WHEN HIT A SYMBOL
C       FOR CONCORDANCE SET ICZ FOR END OF A CLAUSE
   140 IF (IERR.EQ.2) GO TO 180
       IF (ISYMBL.EQ.1)IJJ(I)=1H
       IF (J.GT.3)GO TO 90
       KS=K
       CALL ENCDE(K,ICO,I)
```

```
      IF (IIWORD(1).EQ.3HDR..OR.IIWORD(1).EQ. 3HMR..OR.IIWORD(1).EQ.
     14HMRS.)GO TO 92
      IF (IIWORD(1).EQ.1H )ICO=0
142   IEND=2
      ICZ=1
      ISY=2
C     COUNT NUMBER OF STATEMENTS AND QUESTIONS
      IF (IJJ(I).EQ.1H.) NSTAT(IJ)=NSTAT(IJ)+1
      IF (IJJ(I).EQ.IDO) NQUES(IJ)=NQUES(IJ)+1
      IF (IJJ(I).EQ.ISIMBOL(10)) NEXC(IJ)=NEXC(IJ)+1
      GO TO 92
C     REACH HERE AT END OF ANY WORD INDICATED BY BLANK
  145 IF (K.EQ.1) GO TO 180
C     FOR BLANK BETWEEN SLASHES FORGET BLANKS
      IF (ISW.EQ.2) GO TO 235
C     WHEN IERR=2, DONT RECORD WORD
      ISY=1
      IF (IERR.EQ.2) GO TO 180
      GO TO 90
C     REACH HERE AFTER LEFT PARENTHESIS
150   IF (ITAPE.EQ.7.AND.IPARENS.EQ.2)GO TO 90
      IJJ(I)=1H
      IF (IPARENS-2) 160,155,155
C     IF IPARENS GE 2 INCLUDE WORD
  155 K=K-1
      IF (K.NE.0) GO TO 90
      GO TO 235
  160 IERR=2
      GO TO 235
C     REACH HERE AFTER RIGHT PARENTHESIS
165   IF (ITAPE.EQ.7.AND.IPARENS.EQ.2)GO TO 90
      IJJ(I)=1H
      IF (IPARENS-2) 170,175,90
  170 IERR=1
      K=0
      GO TO 235
C     REACH HERE AFTER RIGHT PARENTHESIS WHEN INCLUDING WORD BUT NOT
C        COUNTING IT
  175 CALL ENCDE (K,ICO,I)
      IF (IIWORD(1).EQ.1H ) GO TO 235
      CALL NEWORD (IJ,I,NPEOPLE,ICO,2)
C     REACH HERE WHEN DONT WANT TO RECORD A NEW WORD
  180 K=0
      GO TO 235
C     REACH HERE FOR KEY WORDS ANALYSIS (ITAPE=2)
  185 IP=IKEY
C     COMPUTE UNIT TO READ WORDS OFF OF FOR 1ST PERSON
      I=LAST-(2*NPEOPLE-2)
      IT=1
      IF (XMODF(I,2).EQ.0) IT=-1
C     UNIT TO WRITE PERSONS WORDS ONTO
      ITI=I+IT
C     LOOP FOR EACH PERSONS WORDS
      DO 220 II=1,NPEOPLE
C     STARTING PT IN ARRAY FOR PERSONS WORDS
      IL=(II-1)*1000
```

```
C     READ WORD, FREQUENCY, AND TAG FOR WHETHER IS A PREVIOUS KEYWORD
  190 READ (I) ICO,ICNT,JTG
      IF (EOF,I) 215,195
C     SEE IF WORD IS IN KEY WORD LIST
  195 DO 200 LK=1,IP
      IF (ICO,EQ.ISPKW(LK)) GO TO 205
  200 CONTINUE
      GO TO 210
  205 IL=IL+1
C     PUT WORD AND ITS FREQ INTO ARRAY AND TAG IT
      ICT(IL)=ICNT
      ICON1(IL)=ICO
      JTG=1
      IF (NPEOPLE,GT,1) ICON1(II*1000)=ICON1(II*1000)+1
      IF (NPEOPLE,EQ,1) ICON1(4000)=ICON1(4000)+1
  210 WRITE (ITI) ICO,ICNT,JTG
      GO TO 190
  215 REWIND I
      END FILE ITI
      REWIND ITI
      LAST=ITI
      I=I+2
      IF (I,GT,2*NPEOPLE) RETURN
      ITI=I+IT
  220 CONTINUE
C     END OF LOOP FOR EACH PERSONS WORDS
      PRINT 275
      RETURN
C     FREACH HERE AFTER EACH WORD FOR SENTENCE ANALYSIS
C     CAN DO A SENTENCE ANALYSIS FOR ONLY 2 PEOPLE
  225 IF (IJ,GT,2) GO TO 235
      CALL SENT (IJ,ICO)
      GO TO 235
C     READ TEXT FROM UNIT 10 WHEN REPEATING PREVIOUS DATA SAMPLE
C   *************************************************************************
  230 L=10
      REWIND L
      GO TO 20
  234 IF (IJJ(I),EQ,1H )GO TO 235
      IPRN=0
  235 CONTINUE
C     END OF LOOP FOR EACH CHARACTER IN A LINE OF TEXT
C   *************************************************************************
C   *************************************************************************
      IF (ITAPE,NE,5) GO TO 20
      PRINT 255
      PRINT IFMT, ISEQ,(IJJ(J),J=1,NCHAR)
      GO TO 20
  240 END FILE 20
      PER=(FLOATF(ICPAR)/FLOATF(NCON))*100,*,5
      IF (ITAPE,EQ,5) PRINT 260, ICPAR,NCON,PER
      RETURN
C
C
  245 FORMAT (1H1)
  250 FORMAT (1X,A8,1X,80A1)
  255 FORMAT (/)
  260 FORMAT (/, 23H TOTAL WORDS PARSED IS ,I5, 21H TOTAL WORDS READ IS
     1,I5,  9H THIS IS ,F7.2,  8H PERCENT)
  265 FORMAT (86H THE NAME OF THE SPEAKER WAS NOT RECOGNIZABLE, HIS CONV
     1ERSATION WAS IGNORED-------------,/1X,A8,3X,4A8)
  270 FORMAT (90H SPEAKER NAME GREATER THAN 16 LETTERS PROBABLY SECOND S
     1LASH MISSING, CONVERSATION IGNORED.,/1X,2A8)
  275 FORMAT (32H ERROR IN LOGIC AT KEY WORD LOOP)
      END
      SUBROUTINE MDTPC(IB,IN,IJ)
C  THIS SUBROUTINE LOOKS AT WORDS IN A CLAUSE TO DETERMINE VALENCE AND
C        TOPIC
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      COMMON/12/ITTPC(7,4),ICMBN(4),ICG(4),IAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100),ITPWD(2,1000),ITPW(1000),ICOG(2,200),ICOGG(200)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DIMENSION MODE(3),IVAL(3),ITP(7),NUM(10)
      EQUIVALENCE (ICON1,ICON2),(ISPKW,IKWD),(ITPW,ITPWD),(ICO,IIWORD),
     1(ICLZ,ICLZ2),(ICOG,ICOGG)
      DOUBLE PRECISION ICLZ,ICO,ISPKW,ICON1,ITPW,ICOGG
C  ***************************************************************
      DATA(NUM=1H0,1H1,1H2,1H3,1H4,1H5,1H6,1H7,1H8,1H9)
C  ***************************************************************
      DO 4 I=1,3
      MODE(I)=1H
4     IVAL(I)=1H
      DO 5 I=1,7
5     ITP(I)=1H
C  ***************************************************************
C  BEGIN LOOP TO LOOK AT WORDS
C  ***************************************************************
      DO 70 I=IB,IN
      ICO=ICLZ(I)
C  FILL ARRAY LET WITH LETTERS OF WORD
C  ***************************************************************
      CALL ENDING(ICO,JJ)
      ND=JJ-1
      DO 170 K=1,12
      IF(LET(JJ).EQ.ISIMBOL(K))CALL PART(1,ND,ICO)
  170 CONTINUE
      ITM=0
      LINE=1
C  CHECK FOR AFFECTIVE WORDS
C  ***************************************************************
      IF(ICLZ2(1,I).EQ.4HFEEL.OR.ICLZ2(1,I).EQ.5HFEELS.OR.ICLZ2(1,I).EQ.
     14HFELT.OR.ICLZ2(1,I).EQ.7HFEELING)GO TO 200
      IF(ICLZ2(1,I).EQ.4HSEEM.OR.ICLZ2(1,I).EQ.5HSEEMS.OR.ICLZ2(1,I).EQ.
     16HSEEMED.OR.ICLZ2(1,I).EQ.7HSEEMING)GO TO 200
      GO TO 6
  200 MODE(3)=1H2
      IVAL(1)=1H0
      GO TO 70
6     DO 10 J=1,K2
      IF (ICO    .NE.ISPKW(J))GO TO 10
      MODE(3)=1H2
C  CHECK FOR NOT BEFORE AFFECTIVE WORD
C  ***************************************************************
      IK=I-1
      DO 8 JK=IB,IK
```

```
          IF (ICLZ2(1,JK ).EQ.3HNOT)GO TO 7
          IF(ICLZ2(1,JK).EQ.5HNEVER)GO TO 7
          CALL ENDING(ICLZ(JK ),JJ)
          CALL PART(JJ-2,JJ,IND)
      C  CHECK FOR N-T BEFORE AFFECTIVE WORD
      C  ********************************************************************
          IF (IND.EQ.3HN-T)GO TO 7
      8   CONTINUE
      C  DECIDE ON VALENCE
      C  ********************************************************************
          IF (J.LE.IKEY )IVAL(3)=1H2
          IF (J.GT.IKEY )IVAL(2)=1H1
          GO TO 70
      C  VALENCE SHIFT FOR AFFECT WORDS PRECEDED BY A NEGATIVE
      C  ********************************************************************
        7 IF(J.LE.IKEY)IVAL(1)=1H0
          IF(J.GT.IKEY)IVAL(3)=1H2
          GO TO 70
      10  CONTINUE
      122 IF (ITM.EQ.8)GO TO (20,22),LINE
      C  THIS SECTION STRIPS ENDINGS OFF OF WORDS
      C  ********************************************************************
          ITM=ITM+1
          GO TO (11,12,13,14,15,16,17,18),ITM
      C  ENDING S
      11  ND=JJ-1
          IF (LET(JJ).EQ.1HS)GO TO 19
          ITM=ITM+1
      C  ENDING E
      12  IF (LET(JJ).EQ.1HE)GO TO 19
          ITM=ITM+1
      C  ENDING ES
      13  ND=JJ-2
          IF (LET(JJ).EQ.1HS.AND.LET(JJ-1).EQ.1HE)GO TO 19
          ITM=ITM+1
      C  ENDING ED
      14  IF (LET(JJ).EQ.1HD.AND.LET(JJ-1).EQ.1HE)GO TO 19
          ITM=ITM+1
      C  ENDING LY
      15  IF (LET(JJ).EQ.1HY.AND.LET(JJ-1).EQ.1HL)GO TO 19
          ITM=ITM+1
      C  ENDING ING
      16  ND=JJ-3
          IF (LET(JJ).EQ.1HG.AND.LET(JJ-1).EQ.1HN.AND.LET(JJ-2).EQ.1HI)
         1GO TO 19
          ITM=ITM+1
      C  ENDING FUL
      17  IF (LET(JJ).EQ.1HL.AND.LET(JJ-1).EQ.1HU.AND.LET(JJ-2).EQ.1HF)
         1GO TO 19
          ITM=ITM+1
      C  ENDING FULLY
      18  ND=JJ-5
          CALL PART(JJ-4,JJ,IND)
          IF (IND.EQ.5HFULLY)GO TO 19
          GO TO (20,22),LINE
      19  CALL PART(1,ND,ICO)
```

```
         GO TO (6,123),LINE
   20    ITM=0
         ICO=ICLZ(I)
         LINE=2
C  CHECK FOR COGNITIVE WORDS
C  ******************************************************************
  123    DO 21 J=1,IKEY3
         IF (ICO,NE,ICOGG(J))GO TO 21
         MODE(2)=1H1
         GO TO 70
   21    CONTINUE
         GO TO 122
   22    KK=KT(5)
         ICO=ICLZ(I)
         ITM=0
C  SECTION TO CHECK TOPICS
C  ******************************************************************
         CALL PART(JJ-4,JJ,IWD)
C  ENDING OLOGY
         IF (IWD,EQ.5HOLOGY)GO TO 55
C  CHECK TOPIC KEY WORDS
   25    DO 60 J=1,KK
         IF (ICO    ,NE,ITPW(J))GO TO 60
         IF (ITPWD(1,J),NE,6HSCHOOL)GO TO 26
         IF (ICLZ2(1,I-1),EQ,4HHIGH.OR,ICLZ2(1,I-1),EQ.6HJUNIOR,OR,
        1ICLZ2(1,I-1),EQ,8HELEMENTA.OR,ICLZ2(1,I-1),EQ,7HPRIMARY,OR,
        2ICLZ2(1,I-1),EQ,7HPRIVATE)GO TO 60
   26    DO 40 K=1,5
         IF (J,LE,KT(K))GO TO 50
   40    CONTINUE
         GO TO 60
C  TOPIC WORD FOUND - DECIDE WHICH TOPIC
C  ******************************************************************
   50    ITP(K+1)=NUM(K+1)
         GO TO 70
   55    ITP(2)=1H1
         MODE(2)=1H1
         GO TO 70
   60    CONTINUE
C  NO TOPIC WORD FOUND - PREPARE TO STRIP ENDINGS
C  ******************************************************************
         IF (ITM,EQ.2)GO TO 70
         ITM=ITM+1
         IF (ITM,EQ.2)GO TO 64
C  STRIP ENDING S
         IF (LET(JJ),NE.1HS)GO TO 70
         GO TO 65
C  STRIP ENDING E
      64 IF(LET(JJ-1),EQ,1HE)GO TO 66
         IF(LET(JJ-1),EQ,1H-)GO TO 66
         GO TO 70
      66 CALL PART(1,JJ-2,ICO)
         GO TO 25
   65    CALL PART(1,JJ-1,ICO)
         GO TO 25
C  GO BACK AND CHECK STRIPPED WORDS
```

```
C   ********************************************************************
 70    CONTINUE
C   END OF LOOP - ALL WORDS CHECKED FOR MODE VALENCE AND TOPIC
C   ********************************************************************
C   ********************************************************************
       IF(IVAL(2),EQ,1H1.OR.IVAL(3),EQ.1H2)IVAL(1)=1H
       DO 80 II=1,3
       IF (MODE(II).NE.1H )GO TO 85
 80    CONTINUE
C   DEFAULT CONDITION
C   ********************************************************************
       MODE(1)=1H0
       IVAL(1)=1H0
 85    DO 90 II=1,7
       IF (ITP(II),NE.1H )GO TO 100
 90    CONTINUE
       ITP(1)=1H0
C   PRINT MODE, VALENCE, TOPIC
C   ********************************************************************
  100  IF(MODE(1).EQ.1H0)JMODE=7HNEUTRAL
       IF(MODE(2).EQ.1H1)JMODE=7HCOGNATE
       IF(MODE(3).EQ.1H2)JMODE=6HAFFECT
       IF(MODE(2).EQ.1H1.AND.MODE(3).EQ.1H2)JMODE=5HMIXED
       PRINT 9080,JMODE
 9080  FORMAT (* MODE     =    *,A8)
       IF(IVAL(1).EQ.1H0)JVAL=7HNEUTRAL
       IF(IVAL(2).EQ.1H1)JVAL=8HPOSITIVE
       IF(IVAL(3).EQ.1H2)JVAL=8HNEGATIVE
       IF(IVAL(2).EQ.1H1.AND.IVAL(3).EQ.1H2)JVAL=5HMIXED
       IF(JMODE.EQ.7HCOGNATE.OR.JMODE.EQ.7HNEUTRAL)JVAL=7HNEUTRAL
       PRINT 9081,JVAL
 9081  FORMAT (* VALENCE =    *,A8)
       IF(ITP(1).EQ.1H0)JTP=5HOTHER
       IF(ITP(2).EQ.1H1)JTP=6HSCHOOL
       IF(ITP(3).EQ.1H2)JTP=6HFAMILY
       IF(ITP(2).EQ.1H1.AND.ITP(3).EQ.1H2)JTP=5HCOMBO
       PRINT 9082,JTP
 9082  FORMAT (* TOPIC    =    *,A8)
C   TOTAL UP FOR SUMMARY TABLE
C   ********************************************************************
       IF(JMODE,EQ,7HNEUTRAL)NEUT(IJ)=NEUT(IJ)+1
       IF(JMODE,EQ,7HCOGNATE)ICG(IJ)=ICG(IJ)+1
       IF(JMODE,EQ,6HAFFECT)IAFF(IJ)=IAFF(IJ)+1
       IF(JMODE,EQ,5HMIXED)MAC(IJ)=MAC(IJ)+1
       IF(JVAL,EQ.8HPOSITIVE)IPS(IJ)=IPS(IJ)+1
       IF(JVAL,EQ.8HNEGATIVE)ING(IJ)=ING(IJ)+1
       IF(JVAL,EQ.5HMIXED)MPN(IJ)=MPN(IJ)+1
       IF(JTP,EQ,6HSCHOOL)ITTPC(1,IJ)=ITTPC(1,IJ)+1
       IF(JTP,EQ,6HFAMILY)ITTPC(2,IJ)=ITTPC(2,IJ)+1
       IF(JTP,EQ,5HCOMBO)ICMBN(IJ)=ICMBN(IJ)+1
       IF(JVAL,EQ.5HMIXED)MPN(IJ)=MPN(IJ)+1
       RETURN
       END
```

```
         SUBROUTINE CLAUSE(II,ICZ,IJ)
C   THIS SUBROUTINE SEPARATES A SENTENCE INTO INDEPENDENT CLAUSES
C   ICZ=1 AT END OF A SENTENCE, 0 OTHERWISE
C   IJ=SPEAKER NUMBER
C   II=CHARACTER POSITION IN LINE OF LAST CHARACTER IN WORD
         DIMENSION ICONJ(20),INT(20),IDEM(15),IEXCP(20)
         COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
         COMMON/B/IPART(20),IDESC(101,2)
         COMMON/E/IPERS(60)
         COMMON IFMT(10),NSTAT(4),NQUES(4),IPER(4),NEXC(4),ITWD(4)
         COMMON/4/IJJ(200)
         COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
         COMMON/7/LET(16)
         COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
         COMMON/11/MIN(4),MAX(4),TWD(4)
         COMMON/14/JKP,ISV(100)
         COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
        1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
         COMMON /Z/ MAT1(3,3,8),MAT2(3,3,8)
         DOUBLE PRECISION ICLZ,ICO,ISV
         EQUIVALENCE (ICO,IIWORD)
         EQUIVALENCE(ICLZ,ICLZ2)
C   *********************************************************************
         DATA (ICONJ=3HAND,3HBUT,2HOR,6HANYWAY#7HHOWEVER,6HEXCEPT,
        17HNEITHER,3HNOR,7HHOWEVER,4HPLUS,2HSO#3HYET)
         DATA (INT=4HWELL,6HANYHOW,2HOH,3HYES,2HNO,2HAS,3HALL,3HNOW,
        14HTHEN,4HMOST,4HWHEN,8HTHEREFOR,8HEVERYBOD)
         DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
        1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
         DATA(IPERS=1HI,4HI-VE,3HI-M,3HI-D,4HI-LL,2HWE,5HWE-LL,5HWE-VE,4HWE
        1-D,5HWE-RE,3HYOU,6HYOU-VE,6HYOU-RE,
        15HYOU-D,6HYOU-LL,2HHE,4HHE-S,4HHE-D,4HHE-D,5HHE-LL,3HSHE,5HSHE-S,
        25HSHE-D,5HSHE-D,6HSHE-LL,2HIT,4HIT-S,4HIT-D,4HIT-D,5HIT-LL,4HTHEY,
        37HTHEY-VE,7HTHEY-RE,6HTHEY-D,6HTHEY-D#7HTHEY-LL,7HTHAT-LL,6HTHAT-S
        4      ,5HTHERE,7HTHERE-S,8HTHERE-LL)
         DATA(IEXCP=5HWHERE,4HJUST,5HWHICH,4HEVEN,7HBECAUSE,4HMUCH)
         DATA(IEX=1H%)
C   *********************************************************************
C   ICO= NEW WORD
         IF (ICO,EQ.0,OR,IIWORD(1),EQ,1H )GO TO 4
         IF (IIWORD(1),EQ.1H.,OR,IIWORD(1),EQ,1HS,OR,IIWORD(1),EQ,1H,,OR,
        1IIWORD(1),EQ,IEX)GO TO 3
         IJP=IJP+1
C   IKP=NUMBER OF WORDS IN SENTENCE
C   *********************************************************************
3        IF (IKP,NE.100) IKP=IKP+1
         ICLZ(IKP)=ICO
C   IF THIS IS NOT THE END OF A SENTENCE RETURN
C   *********************************************************************
4        IF (ICZ,NE.1)RETURN
5        IND=1
         IF (IKP,LT.1)GO TO 51
         CALL PARS
C   LOOP TO DELIMIT CLAUSE
C   *********************************************************************
C   *********************************************************************
```

```
      DO 40 I=1,IKP
C  WHEN THERE IS AN IF IN A CLAUSE, PUT REST OF WORDS IN SAME CLAUSE
C  ********************************************************************
      IF(ICLZ2(1,I).NE.2HIF)GO TO 2740
      MLOC=I+1
      DO 2741 JM=MLOC,IKP
      IF(ICLZ2(1,JM).EQ.3HBUT)GO TO 40
 2741 CONTINUE
      GO TO 41
 2740 DO 10 J=1,12
      IF (ICLZ2(1,I).EQ.ICONJ(J)) GO TO 20
10    CONTINUE
      GO TO 40
C  REACH HERE WHEN HIT A CONJUNCTION
C  ********************************************************************
C  IF LESS THAN FOUR WORDS INCLUDING CONJUUNTION - NO CLAUSE
C  ********************************************************************
20    IF ((I-IND).LE.2)GO TO 40
C  IF CONJUNCTION LINKS DIRECTLY 2 VERBS, NO CLAUSE
C  ********************************************************************
      IF (IPART(IDESC(I-1,1)).EQ.4HVERB.AND.IPART(IDESC(I+1,1)).EQ.
     14HVERB)GO TO 40
C  IF COMMA AFTER CONJUNCTION, NEW CLAUSE
C  ********************************************************************
      IF(ICLZ2(1,I+1).EQ.1H,.OR.ICLZ2(1,I+2).EQ.1H,)GO TO 42
21    JJ=1
      IF                           (ICLZ2(1,I+JJ).EQ.3H-=-)JJ=JJ+1
C  IF WORD AFTER CONJ IS PRONOUN, NEW CLAUSE
C  ********************************************************************
      DO 25 J=1,41
      IF (ICLZ2(1,I+JJ).EQ.IPERS(J))GO TO 42
      IF(ICLZ2(1,I+1).EQ.3HNOW.OR.ICLZ2(1,I+1).EQ.4HTHEN.AND.ICLZ2(1,I+2
     1).EQ.IPERS(J))GO TO 42
25    CONTINUE
C  IF WORD AFTER CONJ IS DEMONSTRATIVE PRON, NEW CLAUSE
C  ********************************************************************
      DO 27 J=1,15
      IF (ICLZ2(1,I+JJ).EQ.IDEM(J))GO TO 42
      IF(ICLZ2(1,I+1).EQ.3HNOW.OR.ICLZ2(1,I+1).EQ.4HTHEN.AND.ICLZ2(1,I+2
     1).EQ.IDEM(J))GO TO 42
27    CONTINUE
28    IB=I
      LINE=1
C  THIS SECTION CHECKS FOR NOUN OR PRON AFTER CONJ
38    DO 29 K=IB,IKP
      DO 138 J=1,12
      IF (ICLZ2(1,K).EQ.ICONJ(J))GO TO 40
138   CONTINUE
      IF(IJ.EQ.1)GO TO 549
C  OVERLOOK CERTAIN CLIENT PHRASES
C  ********************************************************************
      IF (ICLZ2(1,K).EQ.1HI.AND.ICLZ2(1,K+1).EQ.4HMEAN)GO TO 43
      IF (ICLZ2(1,K).EQ.1HI.AND.ICLZ2(1,K+1).EQ.5HDON-T.AND.ICLZ2(1,K+2)
     1.EQ.4HKNOW)GO TO 44
      IF (ICLZ2(1,K).EQ.3HYOU.AND.ICLZ2(1,K+1).EQ.4HKNOW)GO TO 43
C  IF HIT ON OF EXCEPTION WORDS, NO NEW CLAUSE
```

```
      C  ****************************************************************************
        549 DO 24 KKK=1,6
            IF (ICLZ2(1,K).EQ.IEXCP(KKK))GO TO 40
      24    CONTINUE
            IF (IPART(IDESC(K,1)).EQ.4HNOUN.OR.IPART(IDESC(K,1)).EQ.4HPRON)GO
           1TO 36
      29    CONTINUE
            GO TO 40
      C  THIS SECTION CHECKS FOR VERB
      C  ****************************************************************************
      36    LINE=2
            IB=K+1
      39    DO 37 K=IB,IKP
            DO 139 J=1,12
            IF (ICLZ2(1,K).EQ.ICONJ(J))GO TO 40
      139   CONTINUE
      C  ELIMINATE CERTAIN PHRASES
      C  ****************************************************************************
            IF(IJ.EQ.1)GO TO 550
            IF (ICLZ2(1,K).EQ.1HI.AND.ICLZ2(1,K+1).EQ.4HMEAN)GO TO 43
            IF (ICLZ2(1,K).EQ.1HI.AND.ICLZ2(1,K+1).EQ.5HDON'T.AND.ICLZ2(1,K+2)
           1.EQ.4HKNOW)GO TO 44
            IF (ICLZ2(1,K).EQ.3HYOU.AND.ICLZ2(1,K+1).EQ.4HKNOW)GO TO 43
      C  VERB FOUND - CHECK EXCEPTIONS
      C  ****************************************************************************
        550 DO 124 KKK=1,6
            IF (ICLZ2(1,K).EQ.IEXCP(KKK))GO TO 40
      124   CONTINUE
            IF (IPART(IDESC(K,1)).EQ.4HVERB)GO TO 42
      37    CONTINUE
            GO TO 40
      43    IB=K+2
            GO TO (38,39),LINE
      44    IB=K+3
            GO TO (38,39),LINE
      C  IF CLAUSE WOULD BE LESS THAN 3 WORDS IN LENGTH, NO CLAUSE
      C  ****************************************************************************
      42    IF ((IKP-I+1).LE.2)GO TO 40
      C  IF THAT AFTER CONJ IS NOT FOLLOWED BY VERB OR ADVERB, NO CLAUSE
      C  ****************************************************************************
            IF (ICLZ2(1,I+1).EQ.4HTHAT.AND.(IPART(IDESC(I+2,1)).NE.4HVERB.AND.
           1IPART(IDESC(I+2,1)).NE.3HADV))GO TO 40
            KK=I-1
      C  CHECK PREVIOUS CLAUSE FOR NOUN OR PRONOUN
      C  ****************************************************************************
            DO 45 K=IND,KK
            IF (IPART(IDESC(K,1)).EQ.4HNOUN.OR.IPART(IDESC(K,1)).EQ.4HPRON)
           1GO TO 46
            DO 145 L=1,41
            IF (ICLZ2(1,K).EQ.IPERS(L))GO TO 46
      145   CONTINUE
      45    CONTINUE
            GO TO 40
      46    LL=K+1
      C  CHECK PREVIOUS CLAUSE FOR VERB
            DO 47 K=LL,KK
      IF (IPART(IDESC(K,1)).EQ.4HVERB)GO TO 48
47    CONTINUE
      GO TO 40
C  PRINT OUT CLAUSE NOT AT END OF SENTENCE
C  **********************************************************************
48    KNT(IJ)=KNT(IJ)+1
      PRINT 9099
 9099 FORMAT (/1X,130(1H*))
      PRINT 35,KNT(IJ),IPER(IJ)
35    FORMAT(/1X,5(1H*),* CLAUSE NO. *,I4,* FOR *,A8)
      CALL SQUEEZE(IND,I-1)
      CALL PERTNS(IND,I-1,IJ)
      CALL MDTPC(IND,I-1,IJ)
      IC=I-IND
      JC=IC
      IEP=0
      IK=I-1
      DO 1002 IQ=IND,IK
      ICO=ICLZ(IQ)
      DO 1001 JQ=1,12
      IF(ICLZ2(1,IQ).EQ.ISIMBOL(JQ))IC=IC-1
 1001 CONTINUE
      IF(ICLZ2(1,IQ).EQ.3H---)IC=IC-1
      IF(ICLZ2(1,IQ).NE.1H()GO TO 999
      IEP=1
      GO TO 1000
  999 IF(IEP.EQ.0)GO TO 1000
      IEP=IEP+1
      IF(ICLZ2(1,IQ).NE.1H))GO TO 1000
      IC=IC-IEP
      IEP=0
 1000 IF(IEP.NE.0)GO TO 1002
      IF(JC.NE.IC)GO TO 1003
      CALL ENDING(ICO,JJ)
      IF(LET(JJ).EQ.1H,.OR.LET(JJ).EQ.1H,.OR.LET(JJ).EQ.1H$)JJ=JJ-1
      NLR(IJ)=NLR(IJ)+JJ
      IF(JJ.GT.5)IBW(IJ)=IBW(IJ)+1
 1003 JC=IC
 1002 CONTINUE
      IF(MIN(IJ).GT.IC)MIN(IJ)=IC
      IF(MAX(IJ).LT.IC)MAX(IJ)=IC
      ITWD(IJ)=ITWD(IJ)+IC
      PRINT 151, IC
C  FOR COUNSELOR SEE WHAT TYPE OF RESPONSE IS
      IF (IJ.EQ.1)CALL COUNS(IND,I-1,IC)
      CALL SPOTTY(IJ)
      CALL MATRIX(IJ)
      IND=I
40    CONTINUE
C  END OF LOOP TO DELIMIT CLAUSES
C  **********************************************************************
C  **********************************************************************
C  PRINT OUT CLAUSE AT END OF A SENTENCE
C  **********************************************************************
41    KNT(IJ)=KNT(IJ)+1
      PRINT 9099
```

```
        PRINT 35,KNT(IJ),IPER(IJ)
50      FORMAT (3I5)
        CALL SQUEEZE(IND,IKP)
        CALL PERTNS(IND,IKP,IJ)
        CALL MDTPC(IND,IKP,IJ)
        IC=IKP-IND+1
        JC=IC
        IEP=0
        DO 2002 IQ=IND,IKP
        ICO=ICLZ(IQ)
        DO 2001 JQ=1,12
        IF(ICLZ2(1,IQ).EQ.ISIMBOL(JQ))IC=IC-1
 2001 CONTINUE
        IF(ICLZ2(1,IQ).EQ.3H---)IC=IC-1
        IF(ICLZ2(1,IQ).NE.1H()GO TO 1999
        IEP=1
        GO TO 2000
 1999 IF(IEP.EQ.0)GO TO 2000
        IEP=IEP+1
        IF(ICLZ2(1,IQ).NE.1H))GO TO 2000
        IC=IC-IEP
        IEP=0
 2000 IF(IEP.NE.0)GO TO 2002
        IF(JC.NE.IC)GO TO 2003
        CALL ENDING(ICO,JJ)
        IF(LET(JJ).EQ.1H..OR.LET(JJ).EQ.1H,.OR.LET(JJ).EQ.1H$)JJ=JJ-1
        NLR(IJ)=NLR(IJ)+JJ
        IF(JJ.GT.5)IBW(IJ)=IBW(IJ)+1
 2003 JC=IC
 2002 CONTINUE
C  MIN=LENGTH OF SHORTEST CLAUSE
        IF(MIN(IJ).GT.IC)MIN(IJ)=IC
C  MAX=LENGTH OF LONGEST CLAUSE
        IF(MAX(IJ).LT.IC)MAX(IJ)=IC
C  TWD=TOTAL NUMBER OF WORDS USED BY SPEAKER IJ
        ITWD(IJ)=ITWD(IJ)+IC
        PRINT 151, IC
151     FORMAT (* NUMBER OF WORDS IN CLAUSE=*,I5)
C  FOR COUNSELOR SEE WHAT TYPE OF RESPONSE IS
C  ************************************************************
        IF (IJ.EQ.2)GO TO 5003
        CALL COUNS(IND,IKP,IC)
        CALL SPOTTY(IJ)
        CALL MATRIX(IJ)
        GO TO 51
C  SAVE CLIENTS SENTENCE
 5003 CALL SPOTTY(IJ)
        CALL MATRIX(IJ)
        JKP=IKP
        DO 1004 I=1,JKP
        ISV(I)=ICLZ(I)
1004    CONTINUE
C  INITIALIZE AND RETURN
C  ************************************************************
51      IKP=0
        ICZ=0
```

```
      IJP=0
      RETURN
      END
      SUBROUTINE PERTNS(IB,IN,IJ)
C  IJ=1 FOR COUNSELOR, =2 FOR CLIENT
C  THIS SUBROUTINE ANALYZES A CLAUSE FOR PERSON AND TENSE
      COMMON/B/IPART(20),IDESC(101,2)
      COMMON/D/IPERPRON(8)
      COMMON/E/IPERS(60)
      COMMON/6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/12/ITTPC(7,4),ICMBN(4),ICG(4),IAFF(4),IPS(4),ING(4),
     1IPRS(3,4),ITNS(3,4),NEUT(4),MPN(4),MAC(4)
      COMMON/13/IPR,ITN,KPR,KTN
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DIMENSION IIWORD(2),IEQVB(60),IPRES(20),IPAST(75),KVB(2)
     1,IPR(3),ITN(3),KPR(3),KTN(3),JKQ(5),IDEM(15)
      DOUBLE PRECISION ICLZ,ICO,JVB
      EQUIVALENCE(ICO,IIWORD),(ICLZ,ICLZ2),(JVB,KVB)
C  ****************************************************************
      DATA(KVB(2)=8H        )
C  ****************************************************************
      DATA(IEQVB=0,4HHAVE,2HAM,5HWOULD,4HWILL,0,4HWILL,4HHAVE,5HWOULD,
     13HARE,0,4HHAVE,3HARE,5HWOULD,4HWILL,
     1        0,2HIS,3HHAD,5HWOULD,4HWILL,0,2HIS,3HHAD,5HWOULD,4HWILL,0,2H
     2IS,3HHAD,5HWOULD,4HWILL,0,4HHAVE,3HARE,5HWOULD,3HHAD,4HWILL,4HWILL
     3,2HIS,0,2HIS,4HWILL)
C  ****************************************************************
      DATA(IPRES=2HAM,3HARE,2HIS,2HDO,4HDOES,4HHAVE,3HHAS,2HGO,5HCOULD,
     15HWOULD,6HSHOULD)
      DATA(IPAST=3HWAS,4HWERE,3HDID,3HHAD,4HWENT,4HLEFT,4HCAME,5HWROTE,
     14HDONE,4HTOOK,7HBROUGHT,6HCAUGHT,3HSAW,3HRAN,3HGOT,4HBEEN,4HMADE,
     15HDRUNK,5HSTOLE,5HBUILT,4HFELT,4HSENT,4HSWAM,4HSANK,4HSUNK,5HFOUND
     3,4HKNEW,7HTHOUGHT,6HTAUGHT,4HPAID,4HGAVE,3HWAS,4HKEPT,4HSAID,
     45HMIGHT,4HFELT,5HHEARD,5HSPOKE,5HDROVE,4HHUNG,4HSANG,3HLIT,3HBIT,
     53HSAT,4HLAID,4HRODE,3HATE,5HDRANK)
C  ****************************************************************
      DATA(JKQ=3HHOW,4HWHAT,5HWHERE,4HWHEN,3HWHY)
C  ****************************************************************
      DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
     1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
      DO 5 I=1,3
      KPR(I)=IPR(I)
      KTN(I)=ITN(I)
      IPR(I)=1H
5     ITN(I)=1H
C  CHECK FOR ARTICLE AS 1ST OR 2ND WORD
C  ****************************************************************
      I=IB
      J=16
      IF(ICLZ2(1,IB).EQ.2HOR.OR.ICLZ2(1,IB).EQ.3HAND.OR.ICLZ2(1,IB).EQ.3
     1HBUT)I=I*1
      IF(ICLZ2(1,I).EQ.3HTHE.OR.ICLZ2(1,I).EQ.2HAN.OR.ICLZ2(1,I).EQ.1HA)
     1GO TO 30
      DO 707 K=1,14
      IF(ICLZ2(1,I).EQ.IDEM(K))GO TO 30
  707 CONTINUE
      DO 708 J=1,41
      IF(ICLZ2(1,I).EQ.IPERS(J))GO TO 30
  708 CONTINUE
C   CHECK FOR LET-S
C  ******************************************************************
      DO 7 I=IB,IN
      IF(ICLZ2(1,I).EQ.5HLET-S)GO TO 8
7     CONTINUE
      GO TO 9
8     IPR(2)=1H2
      ITN(2)=1H2
      GO TO 157
C   CHECK FOR QUESTION
C  ******************************************************************
    9 IBO=IB+1
      DO 500 I=IB,IBO
      ISTOP=0
      DO 505 K=1,41
      IF(ICLZ2(1,I+1).EQ.IPERS(K))ISTOP=1
  505 CONTINUE
      DO 500 J=1,5
      IF(ICLZ2(1,I).EQ.JKQ(J).AND.ISTOP.NE.1)GO TO 301
  500 CONTINUE
      CALL ENDING(ICLZ(IN),JJ)
      IF(LET(JJ).NE.1H$)GO TO 11
      II=IN-3
      DO 12 I=II,IN
      IF(ICLZ2(1,I).EQ.5HISN-T)GO TO 1
12    CONTINUE
C   CHECK FOR VERB FOLLOWED BY PRONOUN
C  ******************************************************************
  301 DO 13 I=IB,IN
      IF(IPART(IDESC(I,1)).NE.4HVERB)GO TO 13
C  VERB FOUND NOW CHECK PRONOUN
C  ******************************************************************
      II=I+1
      DO 14 J=II,IN
      DO 144 K=1,41
      IF(ICLZ2(1,J).EQ.IPERS(K))GO TO 15
144   CONTINUE
14    CONTINUE
      IPR(3)=1H3
C  PRONOUN FOUND FIND TENSE OF VERB
C  ******************************************************************
      GO TO 16
13    CONTINUE
      IPR(3)=1H3
      ITN(2)=1H2
C  DEFAULT CONDITION
C  ******************************************************************
      GO TO 157
   15 IF(K.LE.10)IPR(1)=1H1
      IF(K.GT.10.AND.K.LE.15)IPR(2)=1H2
      IF(K.GT.15)IPR(3)=1H3
16    IVB=ICLZ2(1,I)
      GO TO 95
C   CHECK FOR  IMPERATIVE
```

```
      C   *************************************************************************
      11      II=0
              IF(ICLZ2(1,IB).EQ.6HPLEASE)GO TO 709
              IF(IPART(IDESC(IB,1)).EQ.4HCONJ)II=II*1
              IF(ICLZ2(1,IB+II).EQ.3HNOW.OR.ICLZ2(1,IB+II).EQ.6HALWAYS.OR.ICLZ2(
             11,IB+II).EQ.5HNEVER)II=II+1
              IF(IPART(IDESC(IB+II,1)).NE.4HVERB)GO TO 1
        709 IPR(2)=1H2
              ITN(2)=1H2
              GO TO 157
      1       JB=IB
      6       DO 20 I=IB,IN
      C   CHECK FOR PRONOUN UNLESS IT IS PRECEEDED BY PREPOSITION OR VERB
      C   *************************************************************************
              DO 10 J=1,41
              IF (ICLZ2(1,I).EQ.IPERS(J).AND.IPART(IDESC(I-1,1)).NE.4HPREP.AND.I
             1PART(IDESC(I-1,1)).NE.4HVERB)GO TO 30
      10      CONTINUE
      20      CONTINUE
              IF ((IN-IB+1).LE.2)GO TO 147
              GO TO 70
      30      JB=I+1
              IF(J.LE.10)GO TO 40
              IF(J.GT.15)GO TO 50
      C   SECOND PERSON
      C   *************************************************************************
              IF (J.EQ.11.AND.ICLZ2(1,I+1).EQ.4HKNOW)GO TO 20
              IPR(2)=1H2
              GO TO 60
      C   FIRST PERSON
      C   *************************************************************************
      40      IF (J.NE.1)GO TO 45
              IF(IJ.EQ.1)GO TO 45
              JLM=I+1
              IF (ICLZ2(1,I+1).EQ.4HMEAN)GO TO 310
              IF (ICLZ2(1,I+1).EQ.5HTHINK)GO TO 310
              IF (ICLZ2(1,I+1).EQ.5HGUESS)GO TO 310
              IF (ICLZ2(1,I+1).EQ.5HDON-T.AND.ICLZ2(1,I+2).EQ.4HKNOW)GO TO 309
              GO TO 45
        309 JLM=JLM+1
        310 JLM=JLM+1
              IF(ICLZ2(1,JLM).EQ.2HIF.OR.ICLZ2(1,JLM).EQ.7HWHETHER.OR.ICLZ2(1,JL
             1M).EQ.5HABOUT.OR.ICLZ2(1,JLM).EQ.4HTHAT)GO TO 45
              DO 305 JG=1,5
              IF(ICLZ2(1,JLM).EQ.JKQ(JG))GO TO 45
        305 CONTINUE
              GO TO 20
      45      IPR(1)=1H1
              GO TO 60
      C   THIRD PERSON
      C   *************************************************************************
      50      IPR(3)=1H3
      60      IVB=IEQVB(J)
              IF (IVB.NE.0)GO TO 95
      C   FIND VERB OF CLAUSE
      C   *************************************************************************
```

```
 70     DO 80 I=JB,IN
        IF (IPART(IDESC(I,1)).EQ.4HVERB)GO TO 90
 80     CONTINUE
        GO TO 145
 C  DO NOT LOOK AT INFINITIVES
 C  ********************************************************************
 90     IF (IPART(IDESC(I-1,1)).EQ.3HINF)GO TO 80
        IVB=ICLZ2(1,I)
 C  CHECK FOR PAST
 C  ********************************************************************
 95     DO 800 KEP=1,48
        IF(IVB.EQ.IPAST(KEP))GO TO 135
   800 CONTINUE
 C  CHECK FOR FUTURE
 C  ********************************************************************
        IF (IVB,EQ.5HSHALL.OR.IVB.EQ.4HWILL,OR.IVB.EQ.6HSHAN-T,OR.IVB.EQ.
      15HWON-T) GO TO 140
 C  CHECK FOR PRESENT
 C  ********************************************************************
        DO 100 L=1,11
        IF (IVB,EQ.IPRES(L))GO TO 120
 100    CONTINUE
        KVB(1)=IVB
 C  STRIP CONTRACTIONS OFF
 C  ********************************************************************
        CALL ENDING(JVB     ,JJ)
        CALL PART(JJ-2,JJ,JVB)
        IF(KVB(1).NE.3HN-T)GO TO 115
        CALL PART(1,JJ-3,JVB)
        IVB=KVB(1)
        GO TO 95
 C  CHECK FOR ED ENDING
 115    CALL PART(JJ-1,JJ,JVB)
        IF(KVB(1).EQ.2HED) GO TO 135
        GO TO 147
 120    IF (L,GT,3)GO TO 130
 C  CHECK FOR FUTURE
 C  ********************************************************************
        IF (ICLZ2(1,I+1).EQ,5HGOING,OR.ICLZ2(1,I+2),EQ.5HGOING)GO TO 140
        IF (ICLZ2(1,I+1).EQ,8HPLANNING.OR,ICLZ2(1,I+2).EQ,8HPLANNING)
      1GO TO 140
        GO TO 145
 130    IF (L,LT,9)GO TO 145
 C  CHECK FOR PAST
 C  ********************************************************************
        IF (ICLZ2(1,I+1).EQ,4HHAVE.AND.IPART(IDESC(I+2,1)).EQ.4HVERB)
      1GO TO 135
        IF (ICLZ2(1,I+2).EQ,4HHAVE.AND.IPART(IDESC(I+3,1)).EQ.4HVERB)
      1GO TO 135
        GO TO 150
 C  PAST
 C  ********************************************************************
 135    ITN(1)=1H1
        GO TO 150
 C  FUTURE
 C  ********************************************************************
```

```
140    ITN(3)=1H3
       GO TO 150
C  PRESENT
C  *****************************************************************
145    ITN(2)=1H2
       GO TO 150
C  FOR MM, NO, OR YES TAKE PERSON AND TENSE FROM PREVIOUS CLAUSE
C  *****************************************************************
147    IF (ICLZ2(1,IB).EQ.2HMM.OR.ICLZ2(1,IB).EQ.3HMM..OR.ICLZ2(1,IB).EQ.
     12HNO.OR.ICLZ2(1,IB).EQ.3HYES)GO TO 180
150    DO 156 J=1,3
       IF (IPR(J).NE.1H )GO TO 257
156    CONTINUE
       IPR(3)=1H3
257    DO 258 J=1,3
       IF (ITN(J).NE.1H )GO TO 157
258    CONTINUE
       ITN(2)=1H2
C  PRINT OUT PERSON AND TENSE
C  *****************************************************************
  157 IF(IPR(3).EQ.1H3)JPR=5HTHIRD
       IF(IPR(2).EQ.1H2)JPR=6HSECOND
       IF(IPR(1).EQ.1H1)JPR=5HFIRST
       IF(ITN(2).EQ.1H2)JTN=7HPRESENT
       IF(ITN(1).EQ.1H1)JTN=4HPAST
       IF(ITN(3).EQ.1H3)JTN=6HFUTURE
       PRINT 160,JPR
  160 FORMAT (1X,*PERSON  =    *,A8)
       PRINT 170,JTN
  170 FORMAT(1X,*TENSE   =    *,A8)
       IF(JPR.EQ.5HFIRST)IPRS(1,IJ)=IPRS(1,IJ)+1
       IF(JPR.EQ.6HSECOND)IPRS(2,IJ)=IPRS(2,IJ)+1
       IF(JPR.EQ.5HTHIRD)IPRS(3,IJ)=IPRS(3,IJ)+1
       IF(JTN.EQ.4HPAST)ITNS(1,IJ)=ITNS(1,IJ)+1
       IF(JTN.EQ.7HPRESENT)ITNS(2,IJ)=ITNS(2#IJ)+1
       IF(JTN.EQ.6HFUTURE)ITNS(3,IJ)=ITNS(3,IJ)+1
       RETURN
C  PUT IN PERSON AND TENSE CALCULATED FROM PREVIOUS CLAUSE
C  *****************************************************************
180    DO 182 I=1,3
182    ITN (I)=KTN(I)
       IF (KPR(1).NE.1H )IPR(2)=1H2
       IF (KPR(2).NE.1H )IPR(1)=1H1
       DO 181 I=1,2
       IF (IPR(I).NE.1H )GO TO 157
181    CONTINUE
       IPR(3)=1H3
       GO TO 157
       END
```

```
      SUBROUTINE PARS
      DIMENSION IART(3), IPERPRON(8), IWORD(2), IPREP(50), ICONJ(15), IH
     1ELP(25), JWORD(2), ITOBE(10), IHAVE(10), IPRON(10), IADV(40), IPRA
     2DJ(7), NUM(101), LET(16), NUMBR(20), IADJ(10) , JSAV(2),IVER(50)
      COMMON /B/ IPART(20),IDESC(101,2)
      COMMON /D/ IPERPRON
      COMMON /6/ ICPAR,ICO,IWORD,ICLZ(100),IKP,ICLZ2(2,100),KPPP,KNT(4)
      COMMON /7/ LET
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2,IKEY3,K1,K2,KT(6)
      DOUBLE PRECISION ICO,ISAV,KWORD,ICLZ
      EQUIVALENCE (ICO,IWORD), (KWORD,JWORD), (ICLZ,ICLZ2),(ISAV,JSAV)
      DATA (IART=1HA,2HAN,3HTHE)(IPERPRON=1HI,2HWE,3HYOU,2HHE,3HSHE,2HIT
     1    ,4HTHEY)(IPREP=     2HBY,3HFOR,2HAT,2HIN,4HWITH,2HOF,2HON,
     24HFROM,4HINTO,3HPRO,4HONTO,7HBETWEEN,5HAFTER,5HUNDER,6HBEFORE,
     37HTHROUGH,5HUNDER,4HOVER,7HAGAINST,6HACROSS,5HAMONG,5HABOUT,
     46HDURING,6HTOWARD)
     4(ICONJ=3HAND, 2HOR,3HNOR,3HBUT,6HEITHER,7HNEITHER,7HBECAUSE,
     47HWHETHER,2HIF,6HTHOUGH,4HTHAN)
     4(IHELP=3HCAN,2HDO,4HDOES,3HDID,5HSHALL,6HSHOULD,4HMUST,3HMAY,
     55HCOULD,5HCAN-T,6HCANNOT,8HCOULDN-T,4HWILL,5HWOULD,8HWOULDN-T,
     57HDOESN-T,5HDON-T,6HDIDN-T,5HWON-T
     6)(ITOBE=4HBEEN,
     6 2HBE,  2HAM,3HARE,2HIS,3HWAS,4HWERE)(IHAVE=4HHAVE,3HHAS,3HHAD)
     4(IADJ=4HEACH,3HALL,5HEVERY)
     2(NUMBR=4HZERO,3HONE,3HTWO,5HTHREE,4HFOUR,4HFIVE,3HSIX,5HSEVEN,
     35HEIGHT,4HNINE,3HTEN)
     7(IPRON=3HWHO,4HWHOM,4HWHAT,2HME,3HHIM,3HHER,2HUS,4HTHEM)
     8(IADV=5HWHERE,4HWHEN,3HWHY,5HNEVER,4HVERY,3HTOO,3HNOT,7HPERHAPS,
     83HNOW,6HALWAYS,5HOFTEN,6HALMOST,4HEVER,7HALREADY,4HTHEN,6HBEHIND
     83HYET,4HHERE,5HTHERE,4HSOON,6HRATHER,4HALSO)
     8                           (IPRADJ=2HMY,4HYOUR,3HHIS,      3HITS,
     93HOUR,5HTHEIR) (IPART=3HART,4HPRON,4HPREP,4HCONJ,4HVERB,4HVERB,
     1 4HVERB,4HPRON,3HADV,4HNOUN,3HADJ,4HVERB, 4HPRON,5HINFIN,4HVERB)
      DATA(IVER=3HTRY,7HIMAGINE,3HSAY,2HDO,4HTELL,7HPRETEND,7HSUPPOSE,
     14HLOOK,4HPICK,4HSTAY,3HSEE,5HTHINK,6HDECIDE,4HHELP,4HTALK,3HPUT,
     12HGO,4HCOME,8HDEVELOPE,4HGROW,3HTRY,8HREMEMBER,5HDON-T,4HMIND,
     14HMAKE,6HLISTEN,6HFOLLOW,3HGET,2HBE,8HEXAGERAT, 8HEMBARRAS)
C     CODES FOR IDESC - 1=ARTICLE,2=PERSONAL PRONOUN,3=PREP,4=CONJ,5=AUX
C         VERB,6=VERB TO BE,7=VERB TO HAVE,8=PRONOUN,9=ADVERB,10=NOUN,
C         11=ADJECTIVE,12=VERB,13=POSSESSIVE PRONOUN,14=INFINITIVE
C         15=VERB
C     2ND PART OF IDESC=1 WHEN WORD IS DEFINITELY CODED(I.E. FROM DICTIO
C         Y) OR AT END OF SENTENCE
C     THIS LOOP CHECKS SPECIFIC DICTIONARIES
      DO 125 I=1,IKP
      ICO=ICLZ(I)
      DO 5 J=1,2
    5 IDESC(I,J)=0
      IDESC(IKP+1,2)=1
      NUM(I)=0
C     ARTICLES
      DO 10 IP=1,3
      IF (IWORD(1).EQ.IART(IP)) GO TO 80
   10 CONTINUE
C     PERSONAL PRONOUNS
      DO 15 IP=1,7
```

```
          IF (IWORD(1).EQ.IPERPRON(IP)) GO TO 65
       15 CONTINUE
C         PREPOSITIONS
          DO 20 IP=1,24
          IF (IWORD(1).EQ.IPREP(IP)) GO TO 95
       20 CONTINUE
C         CONJUNCTIONS
          DO 25 IP=1,11
          IF (IWORD(1).EQ.ICONJ(IP)) GO TO 100
       25 CONTINUE
C         AUXILIARY VERBS
          DO 30 IP=1,19
          IF (IWORD(1).EQ.IHELP(IP)) GO TO 85
       30 CONTINUE
C         VERB TO BE
          DO 35 IP=1,7
          IF (IWORD(1).EQ.ITOBE(IP)) GO TO 70
       35 CONTINUE
C         VERB TO HAVE
          DO 40 IP=1,3
          IF (IWORD(1).EQ.IHAVE(IP)) GO TO 75
       40 CONTINUE
C         OTHER PRONOUNS
          DO 45 IP=1,8
          IF (IWORD(1).EQ.IPRON(IP)) GO TO 115
       45 CONTINUE
C         ADVERBS
          DO 50 IP=1,22
          IF (IWORD(1).EQ.IADV(IP)) GO TO 90
       50 CONTINUE
C         POSSESSIVE PRONOUNS
          DO 55 IP=1,6
          IF (IWORD(1).EQ.IPRADJ(IP)) GO TO 105
       55 CONTINUE
C         ADJECTIVES
          DO 60 IP=1,3
          IF (IWORD(1).EQ.IADJ(IP)) GO TO 110
       60 CONTINUE
C     VERBS
          DO 61 IP=1,31
          IF (IWORD(1).EQ.IVER(IP))GO TO 111
61        CONTINUE
          GO TO 125
       65 IDESC(I,1)=2
          GO TO 120
       70 IDESC(I,1)=6
          GO TO 120
       75 IDESC(I,1)=7
          GO TO 120
       80 IDESC(I,1)=1
          GO TO 120
       85 IDESC(I,1)=5
          GO TO 120
       90 IDESC(I,1)=9
          GO TO 120
       95 IDESC(I,1)=3
```

```
      GO TO 120
  100 IDESC(I,1)=4
      GO TO 120
  105 IDESC(I,1)=13
      GO TO 120
  110 IDESC(I,1)=11
      GO TO 120
111   IDESC(I,1)=15
      GO TO 120
  115 IDESC(I,1)=8
  120 IDESC(I,2)=1
      NUM(I)=1
  125 CONTINUE
      DO 215 I=1,IKP
      IF (IDESC(I,2).EQ.1) GO TO 215
C     ENDING SEPARATES WORD INTO ITS LETTERS
      CALL ENDING (ICLZ(I),JJ)
C     PART GROUPS CERTAIN SETS OF LETTERS TOGETHER
      CALL PART (JJ-1,JJ,ISAV)
C     LY ENDING IS ADVERB
      IF(JSAV(1).EQ.2HLY) GO TO 160
      CALL PART (JJ-3,JJ,ISAV)
      LPART=JSAV(1)
C     SELF ENDING IS PRONOUN
      IF (LPART.EQ.4HSELF) GO TO 150
C     TION AND NESS ENDINGS ARE NOUNS
      IF (LPART.EQ.4HTION.OR.LPART.EQ.4HNESS) GO TO 180
C     ABLE ENDING IS ADJECTIVE
      IF (LPART.EQ.4HABLE) GO TO 175
      CALL PART (JJ-2,JJ,ISAV)
      LPART=JSAV(1)
C     FUL ENDING IS ADJECTIVE
      IF (LPART.EQ.3HFUL) GO TO 175
C     ISM ENDING IS NOUN
      IF (LPART.EQ.3HISM) GO TO 180
      CALL PART (JJ-4,JJ,ISAV)
      LPART=JSAV(1)
C     THING OR TIONS ENDING IS NOUN
      IF (LPART.EQ.5HTHING.OR.LPART.EQ.5HTIONS) GO TO 180
C     SPECIAL TREATMENT OF WORD TO
      IF (ICLZ2(1,I).EQ.2HTO) GO TO 195
      ICO=ICLZ(I)
C     NUMBERS
      DO 130 IP=1,11
      IF (IWORD(1).EQ.NUMBR(IP)) GO TO 135
  130 CONTINUE
      IF (IDESC(I-1,1).EQ.1.OR.IDESC(I-1,1).EQ.13) GO TO 165
      IF (IDESC(I-1,1).EQ.5.OR.IDESC(I-1,1).EQ.2) GO TO 185
      IF (IDESC(I-1,1).EQ.3) GO TO 190
      IF (IDESC(I-1,1).EQ.6.OR.IDESC(I-2,1).EQ.6) GO TO 140
      IF (IDESC(I-1,1).EQ.7.OR.IDESC(I-2,1).EQ.7) GO TO 145
      IF (IDESC(I-1,1).EQ.9.AND.(IDESC(I-2,1).EQ.5.OR.IDESC(I-2,1).EQ.12
     1)) GO TO 185
      IF (IPART(IDESC(I+2,1)).EQ.4HVERB) GO TO 155
      IF (IPART(IDESC(I+1,1)).EQ.4HVERB) GO TO 180
      GO TO 215
```

```
C       FOR PREP AFTER NUMBER, NUMBER IS NOUN
    135 IF (IDESC(I+1,1).EQ,3) GO TO 180
        IF (NUM(I+1).EQ,0) GO TO 170
        GO TO 215
    140 CALL PART (JJ-2,JJ,ISAV)
        IF (JSAV(1).EQ,3HING.OR,LET(JJ).EQ,1HT) GO TO 185
        CALL PART (JJ-1,JJ,ISAV)
        IF (JSAV(1).EQ,2HED) GO TO 175
        GO TO 215
    145 IF (LET(JJ).EQ,1HT) GO TO 185
        IF (LET(JJ).EQ,1HD.OR,LET(JJ).EQ,1HN) GO TO 185
        GO TO 215
C       PRONOUN
    150 NUM(I)=NUM(I)+1
        IDESC(I,1)=8
        GO TO 215
    155 IF (NUM(I+1)) 215,170,215
C       ADVERB
    160 NUM(I)=NUM(I)+1
        IDESC(I,1)=9
        GO TO 215
    165 IF (IDESC(I+1,2).EQ,1) GO TO 180
        CALL ENDING(ICLZ(I+1),JJ)
        IF (LET(JJ),NE,1HD.OR,LET(JJ=1).NE,1HB)GO TO 170
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=12
        GO TO 180
C       ADJECTIVE AND NOUN
    170 NUM(I)=NUM(I)+1
        IDESC(I,1)=11
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=10
        GO TO 215
C       ADJECTIVE
    175 NUM(I)=NUM(I)+1
        IDESC(I,1)=11
        GO TO 215
C       NOUN
    180 NUM(I)=NUM(I)+1
        IDESC(I,1)=10
        GO TO 215
    185 NUM(I)=NUM(I)+1
        IDESC(I,1)=12
        GO TO 215
    190 IF (IDESC(I+1,2).EQ,1,OR,ICLZ2(1,I+1).EQ,2HTO) GO TO 180
        GO TO 170
C       FOR WORD TO - IF FOLLOWING WORD IS IN DICTIONARY, GO TO 507
C           IF 2 WORDS FOLLOWING TO ARE NOT IN DICTIONARY GO TO 506(PREPOSI
    195 IF (IDESC(I+1,2).EQ,1) GO TO 205
        IF (IDESC(I+2,2).NE,1) GO TO 210
C       UNKNOWN AFTER TO, THEN KNOWN - CALL UNKNOWN VERB AND INFINITIVE
        NUM(I)=1
        NUM(I+1)=NUM(I+1)+1
        IDESC(I+1,1)=12
C       INFINITIVE
    200 IDESC(I,1)=14
```

```
      IDESC(I,2)=1
      GO TO 215
C     FOR WORD TO - IF WORD AFTER IT IS KNOWN, CALL IT INFINITIVE
  205 IF (IDESC(I+1,1).GE.5.AND.IDESC(I+1,1).LE.7) GO TO 200
C     IF NOT VERR, PROBARLY IS PRONOUN , SO CALL PREPOSITION
  210 NUM(I)=1
      IDESC(I,1)=3
      IDESC(I,2)=1
  215 CONTINUE
      DO 275 I=1,IKP
      IF (IDESC(I,1).EQ.10.AND.IDESC(I+1,1).EQ.10) IDESC(I,1)=11
      IF (IDESC(I,2).EQ.1.OR.NUM(I).NE.0) GO TO 260
      IF (IDESC(I+1,1).EQ.3.OR.ICLZ2(1,I+1).EQ.2HTO) GO TU 255
      IF (NUM(I+1).EQ.0.AND.IDESC(I+2,1).EQ.3) GO TO 235
      DO 220 IP=1,11
      IF (IWORD(1).EQ.NUMBR(IP)) GO TO 235
  220 CONTINUE
      IF (ICLZ(I-1).EQ.3HHER) GO TO 233
      IF (IDESC(I-1,1).EQ.9.AND.IDESC(I-2,1).EQ.1.AND.NUM(I+1).EQ.0) GO
     1TO 235
      IF (IDESC(I-1,1).EQ.12.AND.I.GE.(IKP-1)) GO TO 230
      DO 225 J=1,3
      IF (ICLZ2(1,I-1).EQ.ICONJ(J)) GO TO 240
  225 CONTINUE
      IF (IDESC(I-1,1).EQ.6.OR.IDESC(I-2,1).EQ.6.OR.IDESC(I-3,1).EQ.6) G
     1O TO 250
      GO TO 260
  230 IF (NUM(I+1)) 231,231,255
231   CALL ENDING(ICLZ(I+1),JJ)
      IF (LET(JJ).NE.1HD.OR.LET(JJ-1).NE.1HE)GO TO 235
      NUM(I+1)=NUM(I+1)+1
      IDESC(I+1,1)=12
      GO TO 255
  235 NUM(I)=1
      IDESC(I,1)=11
      NUM(I+1)=1
      IDESC(I+1,1)=10
      GO TO 260
  240 IF (NUM(I+1).EQ.0) GO TO 245
      IF (NUM(I-2).EQ.0) GO TO 260
      NUM(I)=1
      IDESC(I,1)=IDESC(I-2,1)
      GO TO 260
  245 NUM(I)=1
      IF (NUM(I-3).EQ.0.OR.NUM(I-2).EQ.0) GO TO 260
      IDESC(I,1)=IDESC(I-3,1)
      NUM(I+1)=1
      IDESC(I+1,1)=IDESC(I-2,1)
      GO TO 260
  250 NUM(I)=1
      IDESC(I,1)=11
      GO TO 260
  255 NUM(I)=1
      IDESC(I,1)=10
260   IF (ITAPE.NE.6.AND.ITAPE.NE.5)GO TO 275
      IF (ITAPE.EQ.6.AND.IPART(IDESC(I,1)).NE.4HNOUN.AND.IPART(IDESC(I,1
          1)).NE.4HVERB) GO TO 275
           PRINT 270, ICLZ2(1,I),ICLZ2(2,I)
           PRINT 265, IPART(IDESC(I,1))
           IF (NUM(I).NE.0) ICPAR=ICPAR+1
           GO TO 275
       265 FORMAT (1H+,16X,  5H  -  ,A8/)
       270 FORMAT (/1H+,2A8)
       275 CONTINUE
           DO 276 I=1,IKP
           IF (ICLZ2(1,I).NE.1H()GO TO 276
           IDESC(I,1)=20
           IDESC(I+1,1)=20
           IDESC(I+2,1)=8
   276     CONTINUE
           RETURN
           END
```

```
      SUBROUTINE COUNS(IB,IN,IC)
C  THIS SUBROUTINE CLASSIFIES A COUNSELOR CLAUSE RESPONCE.
C  IB=1ST WORD IN CLAUSE
C  IN=LAST WORD IN CLAUSE
C  IC=NUMBER OF WORDS IN CLAUSE
      DIMENSION IRSP(20),MSS(40),IABLE(10),ICONF(10),IDEM(15)
      COMMON/6/ ICPAR,ICO,IIWORD(2),ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      COMMON/7/LET(16)
      COMMON/13/IPR(3),ITN(3),KPR(3),KTN(3)
      COMMON/14/JKP,ISV(100),ICOUN(20)
      COMMON/B/IPART(20),IDESC(101,2)
      COMMON/E/IPERS(60)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      DOUBLE PRECISION ICO,ISV,ICLZ
      EQUIVALENCE (ICO,IIWORD),(ICLZ,ICLZ2)
C  ****************************************************************
      DATA(ICONF=3HBUT,2HOR,3HYET,7HHOWEVER,8HNEVERTHE)
C  ****************************************************************
      DATA(IABLE=5HCOULD,3HCAN,5HWOULD,4HWILL,5HMIGHT,3HMAY)
C  ****************************************************************
      DATA(IEX=1H*)
C  ****************************************************************
      DATA(IRSP=8HM. S. S.,6HACCENT,8HRESTATE.,8HREFL.SIM,8HREFL.CON,
     18HREFL.CAU,7HINFORM.,8HIMPERAT.,7HPROBE-S,8HPROBE-RH,8HABIL-POT,
     28HSELF-REF,8HJOINT-IM,8H3RD-PERS)
C  ****************************************************************
      DATA(MSS=5HMM-HM,6HUH-HUH,2HOK,3HYES,5HRIGHT,2HMM,4HGOOD,4HFINE,
     14HWELL,2HOH,3HYEH,2HYA,5HHELLO,2HNO,5HMAYBE)
C  ****************************************************************
      DATA(IDEM=2HIT,4HIT-S,5HIT-LL,4HIT-D,4HTHIS,4HTHAT,5HTHESE,5HTHOSE
     1,6HTHAT-S,7HTHIS-LL,7HTHAT-LL,6HTHAT-D,8HTHOSE-RE,8HTHESE-RE)
C  ****************************************************************
      IIWORD(2)=8H
C  CHECK FOR SIMPLE PROBE
C  ****************************************************************
      IF (ICLZ2(1,IN).EQ.1H$)GO TO 21
      CALL ENDING(ICLZ(IN),KK)
      IF (LET(KK).EQ.1H$)GO TO 21
C  CHECK MIN. SOC. STIM.
C  ****************************************************************
      IF (IC.GT.1)GO TO 30
      IIWORD(1)=ICLZ2(1,IB)
      CALL ENDING(ICLZ(IB),KK)
      IF (LET(KK).NE.1H..AND.LET(KK).NE.IEX.AND.LET(KK).NE.1H,)GO TO 10
      CALL PART(1,KK-1,IIWORD(1))
10    DO 20 I=1,15
      IF (IIWORD(1).EQ.MSS(I))GO TO 210
20    CONTINUE
      GO TO 30
C  CHECK FOR PROBE - RHETORICAL
C  ****************************************************************
21    IF (ICLZ2(1,IB).EQ.5HISN-T.AND.ICLZ2(1,IB+1).EQ.2HIT)GO TO 300
      IF (ICLZ2(1,IB).EQ.5HDON-T.AND.ICLZ2(1,IB+1).EQ.3HYOU)GO TO 300
      IF (ICLZ2(1,IB).EQ.2HDO.AND.ICLZ2(1,IB+1).EQ.3HYOU.AND.ICLZ2(1,IB
     1+2).EQ.3HNOT)GO TO 300
```

```
        IF ((ICLZ2(1,IN-1).EQ.5HDON-T.OR.ICLZ2(1,IN-1).EQ.7HDOESN-T).AND.
       1IPART(IDESC(IN,1)).EQ.4HPRON) GO TO 300
        GO TO 290
C   CHECK JOINT IMPERATIVE
C   ***********************************************************************
   30 DO 31 I=IB,IN
        IF(ICLZ2(1,I).EQ.5HLET-S)GO TO 330
        IF(ICLZ2(1,I).EQ.3HLET.AND.ICLZ2(1,I+1).EQ.2HME.OR.ICLZ2(1,I+1).EQ
       1.2HUS)GO TO 330
 31     CONTINUE
        IF (IPART(IDESC(IB,1)).EQ.4HVERB.OR.ICLZ2(1,IB).EQ.6HPLEASE)GO TO
       1280
C   CHECK FOR ACCENT
C   ***********************************************************************
        DO 50 I=1,JKP
        IF (ISV(I).NE.ICLZ(IB))GO TO 50
        K=0
        DO 40 J=IB,IN
        IF (ISV(I+K).NE.ICLZ(J))GO TO 50
        K=K+1
 40     CONTINUE
        GO TO 220
 50     CONTINUE
        IF (IC.EQ.1) GO TO 210
        ICN=0
C   CHECK RESTATE.
C   ***********************************************************************
        DO 80 I=IB,IN
        DO 60 J=1,JKP
        IF (ISV(J).EQ.ICLZ(I))GO TO 70
 60     CONTINUE
        GO TO 80
 70     ICN=ICN+1
 80     CONTINUE
        R=FLOATF(ICN)/FLOATF(IC)
        IF(R.GT.0.6)GO TO 230
C   CHECK FOR INFORMATIONAL
C   ***********************************************************************
        IBB=IB+4
        IF(IN.LE.5)IBB=IN-1
C   CHECK FOR ABILITY POTENTIAL
C   ***********************************************************************
        DO 180 I=IB,IBB
        DO 100 J=1,6
        IF(ICLZ2(1,I).EQ. 2HWE.AND.ICLZ2(1,I+1).EQ.IABLE(J))GO TO 310
        IF(ICLZ2(1,I).EQ.3HYOU.AND.ICLZ2(1,I+1).EQ.IABLE(J))GO TO 310
  100 CONTINUE
C   CHECK 1ST 5 WORDS FOR PRONOUN
C   ***********************************************************************
        DO 171 J=1,41
        IF (ICLZ2(1,I).EQ.IPERS(J).AND.IPART(IDESC(I-1,1)).NE.4HPREP.AND.I
       1PART(IDESC(I-1,1)).NE.4HVERB)GO TO 181
  171 CONTINUE
        DO 170 J=1,14
        IF (ICLZ2(1,I).EQ.IDEM(J))GO TO 270
 170    CONTINUE
```

```
180    CONTINUE
C  REACHES HERE IF NO PRONOUN FOUND
C  **********************************************************************
       GO TO 131
C  CHECK SIMPLE REFLECTION
C  **********************************************************************
  181  IF(J.LE.10)GO TO 320
       IF(J.GT.15.AND.J.LE.25)GO TO 200
       IF(J.GT.25.AND.J.LE.30)GO TO 270
       IF(J.GT.30.AND.J.LE.36)GO TO 200
       IF(J.GT.36)GO TO 270
C  CHECK CONFRONTING REFLECTION
C  **********************************************************************
       DO 150 I=1,5
       IF (ICLZ2(1,IB).EQ.ICONF(I))GO TO 250
150    CONTINUE
C  CHECK CAUSATIVE REFLECTION
C  **********************************************************************
       IF (ICLZ2(1,IB).EQ.2HSO.OR.ICLZ2(1,IB+1).EQ.2HSO)GO TO 260
       DO 160 I=IB,IN
       IF (ICLZ2(1,I).EQ.7HBECAUSE.OR.ICLZ2(1,I).EQ.8HTHEREFOR)GO TO 260
160    CONTINUE
       GO TO 240
  131  IF(JPR.EQ.5HTHIRD)GO TO 270
       IF(JPR.EQ.5HFIRST)GO TO 320
       IF(JPR.EQ.6HSECOND)GO TO 240
C  END CLASSIFICATION SEARCH
C  **********************************************************************
C  THIRD PERSON INFORMATION
200    ITY=14
       GO TO 340
C  MINIMAL SOCIAL STIMULUS
210    ITY=1
       GO TO 340
C  ACCENT
220    ITY=2
       GO TO 340
C  RESTATEMENT
230    ITY=3
       GO TO 340
C  SIMPLE REFLECTION
240    ITY=4
       GO TO 340
C  CONFRONTING REFLECTION
250    ITY=5
       GO TO 340
C  CAUSATIVE REFLECTION
260    ITY=6
       GO TO 340
C  INFORMATIONAL
270    ITY=7
       GO TO 340
C  IMPERATIVE
280    ITY=8
       GO TO 340
C  PROBE
```

```
290    ITY=9
       GO TO 340
C  RHETORICAL QUESTION
300    ITY=10
       GO TO 340
C  ABILITY POTENTIAL
310    ITY=11
       GO TO 340
C  SELF REFERENCE
  320 DO 500 J=1,IN
       IF(ICLZ2(1,J).EQ.4HHEAR.OR.ICLZ2(1,J).EQ.5HHEARD.OR.ICLZ2(1,J).EQ.
     15HSENSE)GO TO 240
  500 CONTINUE
       ITY=12
       GO TO 340
C  JOINT IMPERATIVE
330    ITY=13
340    PRINT 9050,IRSP(ITY)
 9050 FORMAT (* TYPE OF RESPONSE = *,A8)
C  ICOUN=TOTAL FOR COUNSELOR TYPE OF RESPONCE
C  ************************************************************************
       ICOUN(ITY)=ICOUN(ITY)+1
       IW(ITY)=IW(ITY)+IC
       RETURN
       END
```

```
      SUBROUTINE SQUEEZE(I,J)
C  THIS PROGRAM PRINTS OUT A SET OF WORDS IN ARRAY ICLZ FROM WORD I TO J.
C        IT SPACES THE ACTUAL REAL WORDS WITH ONE SPACE BETWEEN THEM.
      DIMENSION ICHAR(1600),KHAR(1600),IIWORD(2)
      COMMON /6/ ICPAR,ICO,IIWORD,ICLZ(100),IKP,ICLZ2(2,100),KP,KNT(4)
      DOUBLE PRECISION ICLZ,ICO
      EQUIVALENCE (ICO,IIWORD),(ICLZ,ICLZ2)
      L1=1
      DO 20 K=I,J,8
      IND=K+7
      IF (IND.GT.J) IND=J
      II=(IND-K+1)*16
      L2=L1+II-1
      DECODE (II,10,ICLZ2(1,K))(ICHAR(L),L=L1,L2)
10    FORMAT (128A1)
      L1=L2+1
20    CONTINUE
      L=0
      DO 30 K=1,L2
      IF (ICHAR(K).EQ.1H .AND.ICHAR(K+1).EQ.1H ) GO TO 30
      L=L+1
      KHAR(L)=ICHAR(K)
30    CONTINUE
35    PRINT 40,(KHAR(K),K=1,L)
40    FORMAT (1X,130A1)
      RETURN
      END
      SUBROUTINE NEWORD (IJ,I,NPEOPLE,ICO,ITT)
C     THIS SUBROUTINE FINDS OUT IF A WORD IS A NEW WORD AND COUNTS THE
C        TIMES A WORD OCCURS
C     ITT=1 FOR MOST WORDS, ITT=2 FOR WORDS INCLUDED BUT NOT COUNTED
      DOUBLE PRECISION ICON1,ICO
      EQUIVALENCE (ICON1,ICON2)
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050)
C     IIJ=STARTING POSITION IN ARRAY OF A PERSON-S WORDS
    5 IIJ=IJ*1000-999
      NN=I
      IF (NPEOPLE.EQ.1) GO TO 10
C     N=POSITION OF LAST WORD IN ARRAY FOR PERSON
      N=ICON1(IIJ+999)+IIJ-1
      IF (N.GE.1000*IJ) N=IJ*1000-2
      IF (XMODF(N,1000).EQ.0) GO TO 30
      GO TO 15
   10 N=ICON1(4000)
      IF (N.GE.4000) N=3998
      IF (N.EQ.0) GO TO 30
C     LOOP FOR BEGINNING TO END OF PERSONS WORDS
   15 DO 20 M=IIJ,N
C     IF  WORD IS ALREADY IN PERSONS WORDS, GO TO 55
      IF (ICO-ICON1(M)) 20,40,20
   20 CONTINUE
C     WHEN WORD NOT ALREADY IN PERSONS WORDS UP TOTAL COUNT OF WORDS BY
C        ONE
      M=N+1
   25 ICON1(M)=ICO
      IF (NPEOPLE.EQ.1) GO TO 35
      ICON1(IIJ+999)=ICON1(IIJ+999)+1
      IF (ITT.EQ.2) RETURN
      GO TO 40
C     FOR FIRST WORD FOR EACH PERSON, M=IIJ=STARTING POINT IN ARRAY
   30 M=IIJ
      GO TO 25
C     FOR CONCORDANCE UP TOTAL WORDS BY ONE
   35 ICON1(4000)=ICON1(4000)+1
      IF (ITT.EQ.2) RETURN
C     UP FREQ COUNTER BY ONE FOR THIS WORD
   40 ICT(M)=ICT(M)+1
      RETURN
      END
      SUBROUTINE ENDING (ICO,JJ)
      COMMON /7/ LET(16)
      DOUBLE PRECISION ICO
    5 DECODE (16,10,ICO) (LET(J),J=1,16)
   10 FORMAT (16A1)
      DO 15 J=1,16
      JJ=16-J+1
      IF (LET(JJ).NE.1H ) GO TO 20
   15 CONTINUE
   20 RETURN
      END
      SUBROUTINE PART (NB,NE,IPART)
      COMMON/7/LET(16)
      DOUBLE PRECISION IPART
      DATA (IBLNK=1H )
      NLEFT=16-(NE-NB+1)
      ENCODE (16,5,IPART) (LET(I),I=NB,NE),(IBLNK,J=1,NLEFT)
    5 FORMAT (16A1)
      RETURN
      END
      SUBROUTINE ENCDE (K,ICO,I)
C     THIS SUBROUTINE PACKS UP TO EIGHT CHARACTERS IN A WORD - USED TO
C     MAKE UP THE VARIOUS WORDS IN A CONVERSATION
      DOUBLE PRECISION ICO
      COMMON/4/IJJ(200)
      IBLNK=1H
      ICO=16H
      IF (K,LE.0) GO TO 15
C     COMPUTE BEGINNING AND ENDING POSITION ON LINE OF WORD
      LL=I-K+1
    5 IF (IJJ(LL).NE.1H ) GO TO 10
      LL=LL+1
      K=K-1
      GO TO 5
   10 IF (K,GT.16) K=16
      KK=LL+K-1
      KL=KK+1
      ENCODE (16.20,ICO) (IJJ(L),L=LL,KK),(IBLNK,L=KL,16)
   15 K=0
      RETURN
C
C
   20 FORMAT (16A1)
      END
      SUBROUTINE SENT (IJ,ICO)
C     THIS SUBROUTINE COMPUTES THE SENTENCE ANALYSIS PART OF DISCOURSE A
      COMMON /A/ ISIMBOL(30),ISELF(8),ICONJUN(11),IDO
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050),ISPKW(500),IKWD(2,5
     100)
      COMMON /9/ IMARK(2),INN(2),IPON(2),ITEST1(2),ITEST2(2),ITEST3(2),I
     1TOTAL(2),ICTN(2),NSWDS(2)
      COMMON /8/ ITAPE,IREPT,IKEY,ISYMBL,IKEY2
      DOUBLE PRECISION ICON1,ISPKW,ICO
      EQUIVALENCE (ICON1,ICON2)
      EQUIVALENCE (ISPKW,IKWD)
      NSWDS(IJ)=NSWDS(IJ)+1
C     M=POSITION FOR NEW SENTENCE WORD TO BE PUT IN ARRAY
      M=INN(IJ)+IPON(IJ)*10+IMARK(IJ)
      GO TO (5,10), IJ
C     FOR PERSON NO. 1
    5 ICON2(1,1200)=M
      GO TO 15
C     FOR PERSON NO. 2
   10 ICON2(1,4050)=M
C     PUT NEW SENTENCE WORD INTO ARRAY OF SENTENCE WORDS
   15 ICON1(M)=ICO
C     SEE IF WORD IS CONJUNCTION
      DO 20 LI=1,11
      IF (ICON2(1,M).EQ.ICONJUN(LI)) GO TO 60
   20 CONTINUE
C     SEE IF WORD IS SELF REFERENCE
      DO 25 LI=1,8
      IF (ICON2(1,M).EQ.ISELF(LI)) GO TO 40
   25 CONTINUE
C     SEE IF WORD IS NEGATIVE
      DO 30 LN=1,IKEY
      IF (ICON1(M).EQ.ISPKW(LN)) GO TO 45
   30 CONTINUE
C     SEE IF WORD IS POSITIVE
      II=IKEY+1
      JJ=IKEY+IKEY2
      DO 35 LP=II,JJ
      IF (ICON1(M).EQ.ISPKW(LP)) GO TO 50
   35 CONTINUE
      ICON2(1,M)=8H
      ICON2(2,M)=8H
      ISN=ISN+1
      IF (IEND.EQ.2) GO TO 65
      GO TO 100
   40 NSELF=1
      GO TO 55
   45 NEGAT=1
      GO TO 55
   50 NPOSIT=1
C     INCREASE KEYWORDS FOUND IN A SENTENCE BY ONE
   55 IMARK(IJ)=IMARK(IJ)+1
C     INCREASE TOTAL WORDS FOUND IN A SENTENCE BY ONE
      ISN=ISN+1
      IF (IEND.EQ.2) GO TO 70
      GO TO 100
```

```
C        IF WORD IS A CONJUNCTION ELIMINATE IT AND TREAT AS END OF SENTENCE
      60 ICON2(1,M)=8H
         ICON2(2,M)=8H
C        IMARK = 1 FOR BEGINNING OF A SENTENCE* NO KEY WORDS IN IT
      65 IF (IMARK(IJ).EQ.1) GO TO 80
C        INITIALIZE FOR BEGINNING OF A SENTENCE
C        REACH HERE AFTER CONJUNCTION OR END OF A SENTENCE
C        COMPUTE STARTING POINT IN ARRAY FOR THIS SENTENCE
      70 IPP1=INN(IJ)+IPON(IJ)*10+1
         ICTN(IJ)=IPP1
         IPP2=IPP1+1
C        THE NUMBER OF THIS SENTENCE IS PUT INTO ICT PARELLEL TO 1ST WORD
C           OF SENTENCE , THE CODE INDICATING TYPE OF SENTENCE IS PUT INTO
C           ICT PARALLEL TO 2ND WORD OF SENTENCE, THE NUMBER OF WORDS IN
C           SENTENCE IS PUT INTO ICT PARALLEL TO 3RD WORD,
         ICT(IPP1)=ITOTAL(IJ)+1
         ICT(IPP1+2)=IMARK(IJ)-2
         IF (NSELF.EQ.1.AND.NPOSIT.EQ.1.AND.NEGAT.EQ.1) GO TO 95
         IF (NSELF.EQ.1.AND.NPOSIT.EQ.1) GO TO 90
         IF (NSELF.EQ.1.AND.NEGAT.EQ.1) GO TO 85
         ICT(IPP2)=4
C        INITIALIZE FOR BEGINNING OF A SENTENCE AT END OF EACH SENTENCE
C        ADD ONE TO TOTAL SENTENCES WITH KEY WORDS IN THEM
      75 IPON(IJ)=IPON(IJ)+1
         NSELF=0
         NPOSIT=0
         NEGAT=0
         IMARK(IJ)=1
C        ADD ONE TO TOTAL SENTENCES
      80 IF (ISN.NE.0) ITOTAL(IJ)=ITOTAL(IJ)+1
         IEND=1
         ISN=0
         K=0
         GO TO 100
C        SELF - NEG SENTENCE
      85 ITEST2(IJ)=ITEST2(IJ)+1
         ICT(IPP2)=2
         GO TO 75
C        SELF POS SNETENCE
      90 ITEST1(IJ)=ITEST1(IJ)+1
         ICT(IPP2)=1
         GO TO 75
C        SELF POS - NEG SENTENCE
      95 ITEST3(IJ)=ITEST3(IJ)+1
         ICT(IPP2)=3
         GO TO 75
     100 RETURN
         END
      SUBROUTINE ALF (N,M,K)
C     THIS SUBROUTINE ALPHABETIZES THE WORDS AND PRINTS THEM OUT
      COMMON /C/ ICON1(4050),ICT(4050),ICON2(2,4050)
      EQUIVALENCE (ICON1,ICON2)
      DOUBLE PRECISION ICON1
      ITG=0
      ITP=K*2-1
      JJK=0
      KA=8H
      DO 5 JK=N,M
C     IN THE UMASS CDC-3600-3800 COMPUTERS, THE CHARACTER CODES FOR
C        LETTERS J-Z RANGE BETWEEN OCTAL 41 AND OCTAL 71.  IN ALPHABETIC
C        FORM, THE LEFT MOST BIT OF WORDS BEGINNING WITH LETTERS J-Z
C        OVERFLOWS INTO THE NEGATIVE BIT OF THE WORD.  THIS LOOP SEARCHE
C        UNTIL IT HITS THE POSITIVE SECTION (A-I) OF THE PRELIMINARY
C        ALPHABETIZED LIST.
      IF (ICON1(JK).GT.0) GO TO 10
    5 CONTINUE
   10 NSTART=JK
C     PRINT WORDS OUT
   15 DO 20 JK=NSTART,M
      PRINT 35, ICON2(1,JK),ICON2(2,JK),ICT(JK)
      WRITE (ITP) ICON2(1,JK),ICON2(2,JK),ICT(JK),ITG
      WRITE (13,17)ICON2(1,JK),ICON2(2,JK),ICT(JK)
17    FORMAT (2A8,I8)
   20 CONTINUE
      IF (JJK.EQ.1) GO TO 25
C     REACH HERE AFTER HAVE PRINTED A-I OF WORDS
      MM=M
      NN=N
      JJK=1
      M=NSTART-1
      NSTART=N
      GO TO 15
C     REACH HERE AFTER FINISHED PRINTING WORDS
   25 M=MM
      N=NN
      END FILE ITP
      REWIND ITP
      REWIND 13
      RETURN
C
C
   30 FORMAT (2A8,I8)
   35 FORMAT (15X,2A8,12X,I8)
      END
      SUBROUTINE SPOTTY(IJ)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
C    ***********************************************************************
      DATA(IAPH=1HA,1HB,1HC,1HD,1HE,1HF,1HG,1HH,1HI,1HJ,1HK,1HL,1HM,1HN)
C    ***********************************************************************
C    IF COUNSELOR - DON-T ENTER CUMULATIVE LOOP
C    ***********************************************************************
      IF(IJ,EQ,1)GO TO 30
C    NEW CLIENT RESPONSE - ADD 1 TO HORIZONTAL AXIS
C    ***********************************************************************
      IX=IX+1
      IF(IX,GT,120)RETURN
      IF(JJPR,EQ.8H        )GO TO 5
      IF(JPR,NE,JJPR)GO TO 25
    5 IF(JJTN,EQ.8H        )GO TO 10
      IF(JTN,NE,JJTN)GO TO 25
   10 IF(JJMODE,EQ,8H        )GO TO 15
      IF(JMODE,NE,JJMODE)GO TO 25
   15 IF(JJVAL,EQ,8H        )GO TO 20
      IF(JVAL,NE,JJVAL)GO TO 25
   20 IF(JJTP,EQ.8H        )GO TO 22
      IF(JTP,NE,JJTP)GO TO 25
C    CRITICAL RESPONSE IDENTIFIED - ADD ONE TO VERTICAL AXIS
C    ***********************************************************************
   22 IY=IY+1
      IF(IY,GT,50)RETURN
   25 IF(IY,EQ,0)RETURN
      ISPOT(IX,IY)=1H*
      JY=IY
      RETURN
C    CHECK AND RECORD TYPE OF COUNSELOR RESPONSE
C    ***********************************************************************
   30 IF(IY-25)31,31,32
   31 JY=JY+1
      IF(IX,GT,0)GO TO 33
C    IF CLIENT HAS NOT RESPONDED YET RECORD PRELIMINARY COUNSELOR RESPONSE(S
C    ***********************************************************************
      JX=1
      IX=JX
      JY=10
      GO TO 33
   32 JY=JY-1
   33 ISPOT(IX,JY)=IAPH(ITY)
      IF(JX,EQ,1)IX=0
      JX=0
      RETURN
      END
      SUBROUTINE MATRIX(IJ)
      COMMON /X/ JPR,JJPR,JTN,JJTN,JMODE,JJMODE,JVAL,JJVAL,JTP,JJTP,IX,
     1IY,JY,ITY,ISPOT(120,50),IAPH(14),NLR(4),IBW(4),IW(20)
      COMMON /Z/ MAT1(3,3,8),MAT2(3,3,8)
      IF(JTN.EQ.4HPAST)LI=1
      IF(JTN.EQ.7HPRESENT)LI=2
      IF(JTN.EQ.6HFUTURE)LI=3
      IF(JPR.EQ.5HFIRST)MI=1
      IF(JPR.EQ.6HSECOND)MI=2
      IF(JPR.EQ.5HTHIRD)MI=3
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.8HPOSITIVE)NI=1
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.5HMIXED)NI=2
      IF(JMODE.EQ.6HAFFECT.AND.JVAL.EQ.8HNEGATIVE)NI=3
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.8HPOSITIVE)NI=4
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.5HMIXED)NI=5
      IF(JMODE.EQ.5HMIXED.AND.JVAL.EQ.8HNEGATIVE)NI=6
      IF(JMODE.EQ.7HCOGNATE)NI=7
      IF(JMODE.EQ.7HNEUTRAL)NI=8
      IF(IJ.EQ.1)MAT1(LI,MI,NI)=MAT1(LI,MI,NI)+1
      IF(IJ.EQ.2)MAT2(LI,MI,NI)=MAT2(LI,MI,NI)+1
      RETURN
      END
      SUBROUTINE SUMMARY(MAT,IPER,K,IHDR,IPUN)
      DIMENSION   PMAT(3,3,8),IRSUM(8),ICSUM(3,3),ISRSUM(2),ITIM(3)
      DIMENSION PRSUM(8),PCSUM(3,3),PSRSUM(2),PTIM(3),MAT(3,3,8)
      DIMENSION IPER(4),IHDR(10)
      DO 4321 LI=1,3
      ITIM(LI)=0
      DO 4321 MI=1,3
      ICSUM(LI,MI)=0
      DO 4321 NI=1,8
      IRSUM(NI)=0
      PMAT(LI,MI,NI)=0.
 4321 CONTINUE
      DO 1300 LI=1,3
      DO 1300 MI=1,3
      DO 1300 NI=1,8
      IRSUM(NI)=IRSUM(NI)+MAT(LI,MI,NI)
      ICSUM(LI,MI)=ICSUM(LI,MI)+MAT(LI,MI,NI)
 1300 CONTINUE
      ISRSUM(1)=IRSUM(1)+IRSUM(2)+IRSUM(3)
      ISRSUM(2)=IRSUM(4)+IRSUM(5)+IRSUM(6)
      IGRSUM=ISRSUM(1)+ISRSUM(2)
      ITSUM=IRSUM(7)+IRSUM(8)+IGRSUM
      DO 1301 LI=1,3
      DO 1301 MI=1,3
      ITIM(LI)=ITIM(LI)+ICSUM(LI,MI)
 1301 CONTINUE
      DO 1302 LI=1,3
      DO 1302 MI=1,3
      DO 1302 NI=1,8
      PMAT(LI,MI,NI)=(FLOATF(MAT(LI,MI,NI))/FLOATF(ITSUM))*100.
 1302 CONTINUE
      DO 1303 NI=1,8
      PRSUM(NI)=(FLOATF(IRSUM(NI))/FLOATF(ITSUM))*100.
 1303 CONTINUE
      DO 1304 LI=1,3
      PTIM(LI)=(FLOATF(ITIM(LI))/FLOATF(ITSUM))*100.
      DO 1304 MI=1,3
      PCSUM(LI,MI)=(FLOATF(ICSUM(LI,MI))/FLOATF(ITSUM))*100.
 1304 CONTINUE
      DO 1305 I=1,2
      PSRSUM(I)=(FLOATF(ISRSUM(I))/FLOATF(ITSUM))*100.
 1305 CONTINUE
      PGRSUM=(FLOATF(IGRSUM)/FLOATF(ITSUM))*100.
      PTSUM=(FLOATF(ITSUM)/FLOATF(ITSUM))*100.
      PRINT 3000,IPER(K)
      PRINT 270,IHDR
  270 FORMAT(1X,9A8,A7)
      PRINT 3001
      PRINT 3018
      PRINT 3002
      PRINT 3003
      PRINT 3004
      PRINT 3005,  ((PMAT(LI,MI,1),MI=1,3),LI=1,3),PRSUM(1)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3007,  ((PMAT(LI,MI,2),MI=1,3),LI=1,3),PRSUM(2),PSRSUM(1)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3008,  ((PMAT(LI,MI,3),MI=1,3),LI=1,3),PRSUM(3)
      PRINT 3004
      PRINT 3009,PGRSUM
      PRINT 3004
      PRINT 3005,  ((PMAT(LI,MI,4),MI=1,3),LI=1,3),PRSUM(4)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3010,  ((PMAT(LI,MI,5),MI=1,3),LI=1,3),PRSUM(5),PSRSUM(2)
      PRINT 3004
      PRINT 3006
      PRINT 3004
      PRINT 3008,  ((PMAT(LI,MI,6),MI=1,3),LI=1,3),PRSUM(6)
      PRINT 3004
      PRINT 3003
      PRINT 3011
      PRINT 3012,  ((PMAT(LI,MI,7),MI=1,3),LI=1,3),PRSUM(7)
      PRINT 3011
      PRINT 3013
      PRINT 3011
      PRINT 3014,  ((PMAT(LI,MI,8),MI=1,3),LI=1,3),PRSUM(8)
      PRINT 3011
      PRINT 3003
      PRINT 3015,((PCSUM(LI,MI),MI=1,3),LI=1,3)
      PRINT 3016,(PTIM(LI),LI=1,3),PTSUM
      PRINT 3017,IPER(K)
      IF(IPUN.NE.1)GO TO 1986
      PUNCH 1973,    IPER(K),(((PMAT(I,J,L),J=1,3),I=1,3),L=1,8)
 1973 FORMAT(1H2,A8,35F2.0/1H3,37F2.0)
      PUNCH 1974,    IPER(K),((PCSUM(I,J),J=1,3),I=1,3),(PRSUM(I),I=1,8)
     1,(PSRSUM(I),I=1,2),PGRSUM
 1974 FORMAT(1H4,A8,20F2.0)
 3000 FORMAT(1H1//,45X,*CLAUSE ANALYSIS MATBIX FOR *,A8/)
 3001 FORMAT(/31X,*PAST*,23X,*PRESENT*,23X,*FUTURE*,18X,*SUMMARY*)
 3018 FORMAT(112X,*TOTALS*/)
 3002 FORMAT(4X,*MODE*,8X,*VALENCE*,3X,*1ST  2ND  3RD*,2(16X,*1ST  2ND
     13RD*))
 3003 FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,22(1H*))
 3004 FORMAT(12X,3(13X,1H*,4X,1H*,4X,1H*,4X,1H*),6X,1H*,3(6X,1H*))
 3005 FORMAT(16X,*POSITIVE *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.0,1
     1X,1H*)),6X,1H*,2X,F2.0,2X,1H*,2(6X,1H*))
 3006 FORMAT(12X,3(13X,16(1H*)),4(6X,1H*))
 3007 FORMAT(4X,*AFFECTIVE*,6X,*MIXED *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,
     13(1X,F2.0,1X,1H*)),6X,1H*,2(2X,F2.0,2X,1H*),6X,1H*)
 3008 FORMAT(16X,*NEGATIVE *,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.0,1
     1X,1H*)),6X,1H*,2X,F2.0,2X,1H*,2(6X,1H*))
 3009 FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,12(1H*),2X,F2.0,2X,1H*)
 3010 FORMAT(4X,*MIXED*,10X,*MIXED *,   1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,
     13(1X,F2.0,1X,1H*)),6X,1H*,2(2X,F2.0,2X,1H*),6X,1H*)
 3011 FORMAT(12X,3(13X,1H*,4X,1H*,4X,1H*,4X,1H*),6X,1H*,20X,1H*)
 3012 FORMAT(4X,*COGNITIVE*,12X,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.
     10,1X,1H*)),6X,1H*,16X,F2.0,2X,1H*)
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3013 FORMAT(1X,40(1H*),2(13X,16(1H*)),6X,1H*,20X,1H*)
3014 FORMAT(4X,*NEUTRAL  *,12X,1H*,3(1X,F2.0,1X,1H*),2(13X,1H*,3(1X,F2.
    10,1X,1H*)),6X,1H*,16X,F2.0,2X,1H*)
3015 FORMAT(4X,*SUMMARY TOTALS*,6X,3(3X,F2.0),2(14X,3(3X,F2.0))/)
3016 FORMAT(5X,3(27X,F2.0),29X,F3.0/)
3017 FORMAT(/* ALL ENTRIES EXPRESSED AS PERCENTS OF TOTAL RESPONSES BY
    1*,A8)
1986 RETURN
     END
```

```
      PROGRAM CHANGE
      DIMENSION V(2,150,5).DIF(2,150,5),VMIN(2,150).VMAX(2,150),XBAR(2,1
     150),IPER(2),LABEL(2,150).SUM(2,150),RANGE(2,150)
      READ 100,((LABEL(I,J),I=1,2),J=1,142)
  100 FORMAT(10A8)
    5 DO 20 N=1,5
      DO 20 M=1,2
      READ 100,IHDR
   10 READ 1970,IPER(M),(V(M,I,N),I=1,22)
 1970 FORMAT(1X,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
      IF(M.EQ.2)GO TO 15
      READ 1973,(V(M,I,N),I=115,128)
 1973 FORMAT(9X,14F2.0)
      READ 1974,(V(M,I,N),I=129,142)
 1974 FORMAT(9X,14F5.2)
   15 READ 1971,(V(M,I,N),I=23,94)
 1971 FORMAT(9X,35F2.0/37F2.0)
      READ 1972,(V(M,I,N),I=95,114)
 1972 FORMAT(9X,20F2.0)
   20 CONTINUE
      DO 22 I=1,142
      DO 22 M=1,2
      SUM(M,I)=0.0
      VMAX(M,I)=0.0
      VMIN(M,I)=1000.
      XBAR(M,I)=0.0
   22 CONTINUE
   25 DO 30 I=1,142
      DO 30 M=1,2
      IF(M.EQ.2.AND.I.GT.114)GO TO 30
      DO 28 N=1,5
      SUM(M,I)=SUM(M,I)+V(M,I,N)
      IF(VMAX(M,I).LT.V(M,I,N))VMAX(M,I)=V(M,I,N)
      IF(VMIN(M,I).GT.V(M,I,N))VMIN(M,I)=V(M,I,N)
      DIF(M,I,N)=V(M,I,N)-V(M,I,1)
   28 CONTINUE
   30 CONTINUE
      DO 35 I=1,142
      DO 35 M=1,2
      IF(M.EQ.2.AND.I.GT.114)GO TO 35
      RANGE(M,I)=VMAX(M,I)-VMIN(M,I)
      IF(SUM(M,I).EQ.0.0)GO TO 35
      XBAR(M,I)=SUM(M,I)/5.
   35 CONTINUE
      DO 40 M=1,2
      PRINT 200
      PRINT 201,IPER(M)
      PRINT 100,IHDR
      PRINT 202
      DO 40 I=1,142
      IF(M.EQ.2.AND.I.GT.114)GO TO 40
      PRINT 203,I,(LABEL(J,I),J=1,2),V(M,I,1),(DIF(M,I,N),N=2,5),XBAR(M,
     1I),VMAX(M,I),VMIN(M,I),RANGE(M,I)
   40 CONTINUE
  200 FORMAT(1H1,24X,*SUMMARY OF VARIABLE STATISTICS*)
  201 FORMAT(34X,*FOR*,A8/)
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202 FORMAT(1X,*VARIABLE*,14X,*PER 1 PER 2 PER 3 PER 4 PER 5    MEAN
   1MAX   MIN   RANGE*/)
203 FORMAT(1X,I3,1X,2A8,5(1X,F5.1),3X,3(1X,F5.2),2X,F5.2)
    DO 60 M=1,2
    PRINT 300
300 FORMAT(1H1)
    DO 60 I=1,142
    IF(M.EQ.2.AND.I.GT.114)GO TO 60
    PRINT 250,I,VMAX(M,I),I,VMIN(M,I)
    PUNCH 250,I,VMAX(M,I),I,VMIN(M,I)
250 FORMAT(6X,*IF(V(*,I3,*).LE.*,F6.2,*.AND.V(*,I3,*).GE.*,F6.2,*)ICT(
   1K)=ICT(K)+1*)
 60 CONTINUE
    STOP
    END
```

```
      IF(V( 90).LE. 81.00.AND.V( 90).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 81.00.AND.V( 91).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE.  0.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE. 30.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  5.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  5.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  4.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 42.00.AND.V( 98).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 41.00.AND.V( 99).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 40.00.AND.V(100).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  0.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  3.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  4.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE.  0.00.AND.V(115).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  5.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  5.00.AND.V(117).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 32.00.AND.V(118).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(119).LE. 14.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  5.00.AND.V(120).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 26.00.AND.V(121).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V(122).LE.  0.00.AND.V(122).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 15.00.AND.V(123).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  4.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 33.00.AND.V(126).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(127).LE.  0.00.AND.V(127).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  9.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  0.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  8.00.AND.V(131).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(132).LE. 26.00.AND.V(132).GE. 11.00)ICT(K)=ICT(K)+1
      IF(V(133).LE. 16.33.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE.  8.00.AND.V(134).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(135).LE. 16.00.AND.V(135).GE.  8.86)ICT(K)=ICT(K)+1
      IF(V(136).LE.  0.00.AND.V(136).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(137).LE. 17.00.AND.V(137).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V(139).LE.  6.00.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 25.25.AND.V(140).GE. 11.64)ICT(K)=ICT(K)+1
      IF(V(141).LE.  0.00.AND.V(141).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(142).LE.  9.67.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOATF(ICT(K))/71.)*100.
C  CHECK FOR GESTALT RESPONSE CHARACTERISTICS
      K=2
      ICT(K)=0
      IF(V(  1).LE.  6.85.AND.V(  1).GE.  5.86)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 50.00.AND.V(  2).GE. 41.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.44.AND.V(  3).GE.  0.37)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.87.AND.V(  4).GE.  3.63)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 44.00.AND.V(  5).GE. 35.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 19.00.AND.V(  6).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 28.00.AND.V(  7).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 67.00.AND.V(  8).GE. 37.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 43.00.AND.V(  9).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 13.00.AND.V( 10).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 98.00.AND.V( 11).GE. 87.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  2.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 71.00.AND.V( 13).GE. 55.00)ICT(K)=ICT(K)+1
      PROGRAM STYLE
      DIMENSION V(150),IPER(2),ICT(3),PCT1(3),PCT2(3)
      READ 101, JOBS
  101 FORMAT(I2)
      DO 99 IJ=1,JOBS
      M=0
    5 M=M+1
  100 FORMAT(10A8)
      READ 100,IHDR
      READ 1970,IPER(M),(V(I),I=1,22)
 1970 FORMAT(1X,A8,F5.2,F2.0,F4.2,F5.2,18F2.0)
      IF(M.EQ.2)GO TO 15
      READ 1973,(V(I),I=115,128)
 1973 FORMAT(9X,14F2.0)
      READ 1974,(V(I),I=129,142)
 1974 FORMAT(9X,14F5.2)
   15 READ 1971,(V(  I  ),I=23,94)
 1971 FORMAT(9X,35F2.0/37F2.0)
      READ 1972,(V(  I  ),I=95,114)
 1972 FORMAT(9X,20F2.0)
      IF(M.EQ.2)GO TO 50
C  CHECK FOR CLIENT CENTERED RESPONSE CHARACTERISTICS
      K=1
      ICT(K)=0
      IF(V(  1).LE. 17.09.AND.V(  1).GE. 10.58)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 34.00.AND.V(  2).GE. 19.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.47.AND.V(  3).GE.  0.39)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.95.AND.V(  4).GE.  3.83)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 32.00.AND.V(  5).GE. 28.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 20.00.AND.V(  6).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 42.00.AND.V(  7).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 41.00.AND.V(  8).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 40.00.AND.V(  9).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  9.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 99.00.AND.V( 11).GE. 91.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 48.00.AND.V( 13).GE. 35.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 10.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 48.00.AND.V( 15).GE. 27.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 23.00.AND.V( 16).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 25.00.AND.V( 17).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 21.00.AND.V( 18).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 20.00.AND.V( 19).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  1.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 70.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 30.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 50.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 50.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE.  1.00.AND.V( 89).GE.  1.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 10.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 33.00.AND.V( 15).GE. 20.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE.  8.00.AND.V( 16).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 13.00.AND.V( 17).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 23.00.AND.V( 18).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 10.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE. 40.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 50.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 30.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 50.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 80.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE.  1.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 64.00.AND.V( 90).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 81.00.AND.V( 91).GE. 11.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 20.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  4.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE. 10.00.AND.V( 96).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  0.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 26.00.AND.V( 98).GE.  8.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 63.00.AND.V( 99).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 43.00.AND.V(100).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  2.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  0.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  0.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE. 13.00.AND.V(115).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  2.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  8.00.AND.V(117).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 31.00.AND.V(118).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(119).LE.  4.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  3.00.AND.V(120).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 29.00.AND.V(121).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(122).LE. 13.00.AND.V(122).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 31.00.AND.V(123).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  2.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 21.00.AND.V(126).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(127).LE.  2.00.AND.V(127).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  0.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  2.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  5.00.AND.V(131).GE.  2.50)ICT(K)=ICT(K)+1
      IF(V(132).LE. 11.60.AND.V(132).GE.  5.88)ICT(K)=ICT(K)+1
      IF(V(133).LE. 16.00.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE. 21.00.AND.V(134).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(135).LE.  7.00.AND.V(135).GE.  5.36)ICT(K)=ICT(K)+1
      IF(V(136).LE.  5.00.AND.V(136).GE.  2.67)ICT(K)=ICT(K)+1
      IF(V(137).LE.  7.13.AND.V(137).GE.  6.14)ICT(K)=ICT(K)+1
      IF(V(139).LE.  9.00.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 10.13.AND.V(140).GE.  7.33)ICT(K)=ICT(K)+1
      IF(V(141).LE.  6.00.AND.V(141).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(142).LE.  0.00.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOATF(ICT(K))/7[illegible].)*100.
C  CHECK FOR RATIONAL EMOTIVE RESPONSE CHARACTERISTICS
      K=3
      ICT(K)=0
      IF(V(  1).LE. 20.13.AND.V(  1).GE. 12.48)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 82.00.AND.V(  2).GE. 38.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.49.AND.V(  3).GE.  0.39)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  4.36.AND.V(  4).GE.  3.52)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 96.00.AND.V(  5).GE. 38.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 26.00.AND.V(  6).GE. 17.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 22.00.AND.V(  7).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 78.00.AND.V(  8).GE. 34.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 50.00.AND.V(  9).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  9.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 97.00.AND.V( 11).GE. 89.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 63.00.AND.V( 13).GE. 39.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 13.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 31.00.AND.V( 15).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 22.00.AND.V( 16).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 13.00.AND.V( 17).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 35.00.AND.V( 18).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 13.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 40.00.AND.V( 81).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 90.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE.  0.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE. 30.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 30.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 30.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 30.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 92.00.AND.V( 90).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 93.00.AND.V( 91).GE. 32.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 30.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE. 40.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  3.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  6.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  3.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 16.00.AND.V( 98).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 70.00.AND.V( 99).GE. 34.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 47.00.AND.V(100).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  6.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  4.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  3.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(115).LE.  4.00.AND.V(115).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(116).LE.  0.00.AND.V(116).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(117).LE.  6.00.AND.V(117).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(118).LE. 31.00.AND.V(118).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(119).LE.  6.00.AND.V(119).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(120).LE.  9.00.AND.V(120).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(121).LE. 38.00.AND.V(121).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(122).LE.  3.00.AND.V(122).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(123).LE. 22.00.AND.V(123).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(125).LE.  9.00.AND.V(125).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(126).LE. 19.00.AND.V(126).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(127).LE. 22.00.AND.V(127).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(128).LE.  3.00.AND.V(128).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(130).LE.  0.00.AND.V(130).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(131).LE.  4.00.AND.V(131).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(132).LE. 14.60.AND.V(132).GE. 11.17)ICT(K)=ICT(K)+1
      IF(V(133).LE. 14.00.AND.V(133).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(134).LE. 37.00.AND.V(134).GE. 22.00)ICT(K)=ICT(K)+1
      IF(V(135).LE. 17.67.AND.V(135).GE.  6.71)ICT(K)=ICT(K)+1
      IF(V(136).LE. 14.00.AND.V(136).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(137).LE. 15.00.AND.V(137).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(139).LE. 52.33.AND.V(139).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(140).LE. 19.60.AND.V(140).GE.  6.00)ICT(K)=ICT(K)+1
      IF(V(141).LE. 34.00.AND.V(141).GE. 10.80)ICT(K)=ICT(K)+1
      IF(V(142).LE.  8.00.AND.V(142).GE.  0.00)ICT(K)=ICT(K)+1
      PCT1(K)=(FLOATF(ICT(K))/71.)*100.
      IF(M.EQ.1)GO TO 5
C   CHECK FOR CLIENT CENTERED EFFECTS
   50 K=1
      ICT(K)=0
      IF(V(  1).LE. 13.17.AND.V(  1).GE.  9.95)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 81.00.AND.V(  2).GE. 66.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.32.AND.V(  3).GE.  0.30)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.80.AND.V(  4).GE.  3.60)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 72.00.AND.V(  5).GE. 68.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 78.00.AND.V(  7).GE. 62.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE.  7.00.AND.V(  8).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 34.00.AND.V(  9).GE. 19.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 16.00.AND.V( 10).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 93.00.AND.V( 11).GE. 84.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  6.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 56.00.AND.V( 13).GE. 30.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE.  3.00.AND.V( 14).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 48.00.AND.V( 15).GE. 31.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 19.00.AND.V( 16).GE.  7.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 18.00.AND.V( 17).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 34.00.AND.V( 18).GE. 15.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 19.00.AND.V( 19).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE. 20.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 50.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE.  0.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 20.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 50.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE.  0.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 31.00.AND.V( 89).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 90.00.AND.V( 90).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 61.00.AND.V( 91).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 80.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 40.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE. 11.00.AND.V( 95).GE.  1.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  0.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  5.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 67.00.AND.V( 98).GE. 54.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE.  7.00.AND.V( 99).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 31.00.AND.V(100).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  4.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  0.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  3.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
C   CHECK FOR GESTALT EFFECTS
      K=2
      ICT(K)=0
      IF(V(  1).LE. 10.40.AND.V(  1).GE.  7.12)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 59.00.AND.V(  2).GE. 50.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.36.AND.V(  3).GE.  0.33)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  3.79.AND.V(  4).GE.  3.53)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 65.00.AND.V(  5).GE. 56.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 12.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 59.00.AND.V(  7).GE. 53.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE. 21.00.AND.V(  8).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 38.00.AND.V(  9).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE.  8.00.AND.V( 10).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 97.00.AND.V( 11).GE. 92.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  2.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 59.00.AND.V( 13).GE. 33.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE.  6.00.AND.V( 14).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 56.00.AND.V( 15).GE. 29.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 10.00.AND.V( 16).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE.  9.00.AND.V( 17).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 23.00.AND.V( 18).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 13.00.AND.V( 19).GE.  3.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  0.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 60.00.AND.V( 81).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE. 20.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE. 40.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE.  0.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE.  0.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE. 20.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 22.00.AND.V( 89).GE.  2.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 50.00.AND.V( 90).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 91.00.AND.V( 91).GE. 42.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 90.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 20.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE. 20.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  4.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  2.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  2.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 56.00.AND.V( 98).GE. 50.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE. 17.00.AND.V( 99).GE.  9.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 36.00.AND.V(100).GE. 24.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  2.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  2.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  0.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
C  CHECK FOR RATIONAL EMOTIVE EFFECTS
      K=3
      ICT(K)=0
      IF(V(  1).LE. 12.21.AND.V(  1).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(  2).LE. 62.00.AND.V(  2).GE. 18.00)ICT(K)=ICT(K)+1
      IF(V(  3).LE.  0.57.AND.V(  3).GE.  0.37)ICT(K)=ICT(K)+1
      IF(V(  4).LE.  4.18.AND.V(  4).GE.  3.51)ICT(K)=ICT(K)+1
      IF(V(  5).LE. 62.00.AND.V(  5).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V(  6).LE. 18.00.AND.V(  6).GE. 13.00)ICT(K)=ICT(K)+1
      IF(V(  7).LE. 76.00.AND.V(  7).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V(  8).LE.  5.00.AND.V(  8).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(  9).LE. 86.00.AND.V(  9).GE. 21.00)ICT(K)=ICT(K)+1
      IF(V( 10).LE. 11.00.AND.V( 10).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 11).LE. 99.00.AND.V( 11).GE. 86.00)ICT(K)=ICT(K)+1
      IF(V( 12).LE.  9.00.AND.V( 12).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 13).LE. 86.00.AND.V( 13).GE. 26.00)ICT(K)=ICT(K)+1
      IF(V( 14).LE. 18.00.AND.V( 14).GE.  5.00)ICT(K)=ICT(K)+1
      IF(V( 15).LE. 42.00.AND.V( 15).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 16).LE. 13.00.AND.V( 16).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 17).LE. 11.00.AND.V( 17).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 18).LE. 34.00.AND.V( 18).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 19).LE. 18.00.AND.V( 19).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 77).LE.  0.00.AND.V( 77).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 78).LE.  0.00.AND.V( 78).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 79).LE.  0.00.AND.V( 79).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 80).LE.  1.00.AND.V( 80).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 81).LE. 90.00.AND.V( 81).GE. 40.00)ICT(K)=ICT(K)+1
      IF(V( 82).LE.  0.00.AND.V( 82).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 83).LE.  0.00.AND.V( 83).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 84).LE. 30.00.AND.V( 84).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 85).LE.  0.00.AND.V( 85).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 86).LE.  0.00.AND.V( 86).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 87).LE. 50.00.AND.V( 87).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 88).LE.  0.00.AND.V( 88).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 89).LE. 53.00.AND.V( 89).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 90).LE. 70.00.AND.V( 90).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 91).LE. 53.00.AND.V( 91).GE.  4.00)ICT(K)=ICT(K)+1
      IF(V( 92).LE. 60.00.AND.V( 92).GE. 10.00)ICT(K)=ICT(K)+1
      IF(V( 93).LE. 50.00.AND.V( 93).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 94).LE.  0.00.AND.V( 94).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 95).LE.  5.00.AND.V( 95).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 96).LE.  0.00.AND.V( 96).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 97).LE.  5.00.AND.V( 97).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V( 98).LE. 68.00.AND.V( 98).GE. 14.00)ICT(K)=ICT(K)+1
      IF(V( 99).LE.  5.00.AND.V( 99).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(100).LE. 86.00.AND.V(100).GE. 16.00)ICT(K)=ICT(K)+1
      IF(V(101).LE.  5.00.AND.V(101).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(102).LE.  0.00.AND.V(102).GE.  0.00)ICT(K)=ICT(K)+1
      IF(V(103).LE.  5.00.AND.V(103).GE.  0.00)ICT(K)=ICT(K)+1
      PCT2(K)=(FLOATF(ICT(K))/46.)*100.
      PRINT 1775,IPER(1),IPER(2)
 1775 FORMAT(25X,*COUNSELING STYLE PROFILE*/36X,*FOR*/26X,A8,* WITH *,A8
     1/)
      PRINT 1779, IHDR
      PRINT 1776
 1776 FORMAT(13X,*CLIENT CENTERED*,5X,* GESTALT*,5X,*RATIONAL EMOTIVE*/)
      PRINT 1777,PCT1(1),PCT1(2),PCT1(3)
 1777 FORMAT(12X,F3.0,13X,F3.0,13X,F3.0////)
      PRINT 1778,IPER(1),IPER(2)
 1778 FORMAT(23X,*COUNSELING EFFECTS PROFILE*/36X,*FOR*/26X,A8,* WITH *,
     1A8/)
      PRINT 1779, IHDR
 1779 FORMAT(/1X,9A8,A7/)
      PRINT 1776
      PRINT 1777,PCT2(1),PCT2(2),PCT2(3)
   99 CONTINUE
      STOP
      END
```

APPENDIX B

RULES FOR KEYPUNCHING DATA

RULES FOR KEYPUNCHING DATA

1. Columns 1 through 8 may be used for card sequence numbers. Generally 4 columns is sufficient. Sequence numbers must be right justified.

2. Each data card must end in a completed word or a blank. Do not attempt to divide a word between cards. If there is not enough room left for a complete word on a card, start the word on the next card.

3. Speaker's names must be preceded and followed by slash (/) symbols. Each time the speaker changes a speaker identification is needed. Example: /ROGERS/

4. Due to limitations in available symbols on a standard keypunch the following substitutes are used:

   a dollar sign ($) is used for a question mark (?)

   a hyphen (-) is used for an apostrophe (')

   a double punch "7/6" is used for an exclamation point (!)

   an asterisk (*) is used for opening (") and closing (") quotation marks.

5. Periods are used only at the end of a sentence. Periods must not be used as punctuation after abbreviations, initials and the like.

APPENDIX C

KEY WORD DICTIONARIES

NEGATIVE AFFECT WORDS

SAD
DISTRESS
MAD
UNLUCKILY
ANXIOUS
DESPIS
NERVOUS
WORRY
SKEPTICAL
SHOCK
NASTILY
SORRY
DISTRUST
TERRIFI
HURT
DISSATISFY
PHONY
MOODY
ANXIETI
AVOID
COMPETITIVE
OFFEND
SERIOUS
ANGER
COMPETITION
MEDIOCRITY
DISCONTENTMENT
HOPELESSNESS
REJECTION
STUPIDITY
TROUBL
AWFUL
HARSH
STRAIN
STEW
FAIL
DI
FLED
SADDER
UNHAPPINESS
DISHONEST
LYING
SHIT
POLLUTION
DISPLEAS
REGRET
HOSTILITY
DESPERATION
THREATEN
FED-UP
APPREHENSIVE
ALARM
PANICKY
REVENG
HUMILIAT
SLOB
SCARY
PROBLEM

UNHAPPY
ANGRY
UPTIGHT
HOPELESS
AFRAID
CRI
SCAR
WORRI
STUPID
VICTIM
HARRIED
GUILTY
SUSPICIOUS
TERRIFY
QUARRELSOME
DISAPPOINT
INDECISION
BLUFF
DISCOURAGE
FLEE
CRITICIZE
SURLINESS
ARGU
FEAR
DEPRESSION
NERVOUSNESS
DISCOURAGEMENT
INSECURITY
RELUCTANCE
DUMB
TROUBLESOM
MISS
TREMOR
TOUCHY
HORRID
MADDEN
DYING
FRUSTRATION
SADDEST
OPINIONATED
STEAL
LIAR
BULLSHIT
FRAUD
BOTHER
MEANINGLESS
BITTER
LEFT-OUT
OVERWHELM
INDIGNANT
INADEQUATE
BAFFL
DREADFUL
REVENGEFUL
TRAPPED
SLUT
GROUCH
DUMBER

UNHAPPILY
ANGRILY
CONFUS
DISCONTENT
HAT
CRY
PRESSUR
TENS
UNSURE
DEFENSIVE
SUICIDAL
GUILTILY
DEPRIV
REPULSIVE
BUG
HARRASS
FAILURE
DISMAY
TERRIBLE
ATTACK
FIGHT
GRIMNESS
AGAINST
ANXIETY
DEPRIVATION
OFFENS
DISSATISFACTION
JEALOUSY
RESENTMENT
SURLY
ANNOYANC
LOUS
ILL
WORSE
HORRIFI
ASHAMED
DEAD
GRIM
SHI
BELLYFUL
STOLE
CHEAT
CORRUPT
FRAUDULENT
BAD
AGGRAVAT
CONFUSION
DISAPPROV
IRRITAT
DESPONDENT
FRANTIC
UNEASY
PANIC
EXASPERAT
SELF-CONSCIOUS
HYPOCRITE
GROUCHY
APATHETIC

RELUCTANT
ANNOY
BLOCK
DISCONCERT
LOATH
LONESOME
SHY
DOUBT
DISILLUSION
AGGRESSIVE
INSECURE
JEALOUS
REJECT
UNCOMFORTABLE
BUGG
CONCERN
FLUNK
SADNESS
APATHY
OFFENSIVE
HIT
DISLIK
SHAM
AGGRESSION
DISILLUSIONMENT
PESSIMISM
GUILT
MURDER
SHYNESS
SUSPICION
HATEFUL
GARBAGE
SICK
WORST
HORRIFY
FOUGHT
DEATH
MOODINESS
STUPIDEST
LOSER
ARGUMENT
UNFAITHFUL
CORRUPTION
HASSL
UNLUCKY
WORTHLESS
CORRUPTION
DISAPPROVAL
IRRITATION
TEED-OFF
PROVOK
UNEASINESS
FUTILE
INFURIAT
UNACCEPTABLE
HYPOCRITICAL
ALIENATED

DEPRESS
FURIOUS
FRUSTRAT
PESSIMISTIC
LOATHSOME
LONELY
UPSET
PUZZL
PAINFUL
NASTY
HELPLESS
BOR
DEJECTED
BULLY
DISSATISFI
FRIGHTEN
MEDIOCRE
ALONE
PAIN
ARGUE
KILL
HATE
RESENT
AVOIDANCE
DISAPPOINTMENT
PREJUDIC
HELPLESSNESS
LONELINESS
SUICID
TENSION
UNINTERESTING
WRONG
TIR
ASHAM
DISGUST
PHONEY
SICK
MURDERER
SUSPECT
LOUSY
LIE
ADULTERY
POLLUT
DEFRAUD
DUMBEST
HOSTILE
DESPAIR
DISGUST
MISERABLE
DESPONDENCY
DEGRAD
PERPLEX
FUTILITY
APPALL
POWERLESS
CRUMMY
IRRITAT

POSITIVE AFFECT WORDS

HAPPY
ECSTATIC
INTEREST
GREAT
THRILL
COMFORTABLE
LAUGH
FAITH
SUCCESS
PEACEFUL
ENCOURAG
RELAX
ECSTACY
WORTH
LIBERAT
AFFECTIONAT
COMFORT
ENCOURAGEMENT
MOTIVATION
PLEASURABLE
RESPECTABLE
SUCCESSFUL
NEATEST
HONESTY
ATTRACT
FIN
FINEST
DISTINGUISHED
MOTHERLY
BRIGHTEST
FRIENDLINESS
HAPPIER
RELIEF
GRATIFI
KIND

HAPPILY
PLEASED
GETTER
GOOD
HOP
CHEERY
JOY
CONFIDENT
ACCEPT
TRANQUIL
ENJOYMENT
SURPRIS
ABLE
AFFECTION
HAPPINESS
APPRECIATIVE
CONTENTMENT
FULFILLMENT
OPTIMISM
POTENTIALITY
RESPECTFUL
LOVABLE
PLEASES
HONOR
ADVANTAG
GRATIFY
DOLL
NEAT
ELIGIBLE
CALMER
FRIENDSHIP
HAPPIEST
RELIEV
GRATIFING
GENTLE

EAGER
PLEASING
STIMULAT
CHEERFUL
LUCKY
CHEERILY
SATISFY
CONFIDENCE
JOYOUS
BEAUTIFUL
PLEASURE
TERRIFIC
PERFECT
CLOSE
PEACE
ATTRACTIVENESS
BRIGHT
GOODNESS
PEACEFULNESS
APTITUDE
SATISFACTION
DELIGHTFUL
SMARTER
RICH
BETTER
FANTASTIC
PEACHY
DESIR
ABILITI
CALMEST
FUNNY
NICER
PRIDE
GRATIFICATION
ENTHUSIASTIC

EXCIT
ENJOY
SURPRISING
DELIGHT
LUCKILY
LOV
SATISFI
MOTIVAT
ATTRACTIVE
SUPERB
NICE
TREMENDOUS
FULFILL
FRIENDLY
ENTHUSIASM
CALMNESS
SMART
GREATNESS
TRANQUILITY
ABILITY
SECURITY
CUTE
SMARTEST
RICHER
BEST
BEAUTY
DESIRABLE
WISH
BEAUTI
ECSTACI
GREATER
NICEST
PROUD
MAGNIFICENT

ELAT
FASCINAT
WINNER
CONTENT
OPTIMISTIC
APPRECIAT
SECURE
TRUST
CALM
EXQUISITE
FUN
WONDERFUL
POTENTIAL
RESPECT
CHEERFULNESS
CLOSENESS
EAGERNESS
HOPEFUL
PERFECTION
RELAXATION
STIMULATION
CUTIE
HONEST
RICHEST
GLAD
GORGEOUS
ACCEPTABLE
SWEET
BRIGHTER
FRIEND
GREATEST
NEATER
GRATEFUL
GROOVY

COGNITIVE WORDS

THINK	THOUGHT	NONSENSE	REASONABLE	REASONABLY
SOLV	SOLUTION	CAUS	BECAUSE	DECID
REASONABLENESS	FIGUR	EFFECT	AFFECT	LOGIC
LOGICAL	COGITAT	PONDER	SUPPOS	EXPECT
GUESS	CONJUR	CONSIDER	RECKON	DEEM
BELIEVE	CONTEMPLAT	REFLECT	CONCEIV	REGARD
APPREHEND	PURPOSEFUL	ESTEEM	DELIBERAT	STUDY
SPECULAT	STUDI	REASON	RUMINAT	UNDERSTAND
COMPREHEND	CONCEPT	CONCEPTION	SUPPOSITION	OPINION
IDEA	PLAN	NOTION	PROVISION	COGITATION
MEDITATION	JUDGMENT	DESIGN	PURPOSE	INTENTION
DELIBERATION	MEDITATIVE	COGNITIVE	PHILOSOPHIC	STUDIOUS
INTROSPECTIVE	EXPLANATION	MOTIV	PROOF	READ
RATIONALITY	JUSTICE	ORDER	RATIONALE	RATIONAL
PROBABLE	JUDICIOUS	SENSIBLE	PRUDENT	PRINCIPLE
ENUMERAT	CONSEQUENCE	RESULT	CONSEQUENTLY	ACCORDING
DETERMIN	ADJUDICAT	RESOLV	ANALYZ	COMPUT
ACCORDANCE	CONTEXT	CONSIDERATION	RESEARCH	CONTEMPLATION
SEARCH	INTELLIGENT	EXPECTATION	REMEMBER	INTELLIGENCE
FACT	PREDICT	FICTITIOUS	INTROSPECTION	PREDICTABLE
DECISIVE	JUDGMENTAL	DELIBERATION	IMPROBABLE	RESOLVABLE
ACCURATE	INACCURATE	SUM	SUMMARY	CONCLUD
CONCLUSION	DEDUCT	DEDUC	DISTINGUISH	CHARACTERISTIC
VARI	VARY	DIFFERENCE	QUOTIENT	MULTIPLY
MULTIPLI	SUPPOSITION	HYPOTHESIS	BELIEF	CAUSATION
COMPUTER	CONSEQUATE	DECISIVENESS	EXPLAIN	FACTUAL
MEDITAT	NONSENSICAL	PHILOSOPHY	PHILOSOPHI	PHILOSOPHIZ
PLANN	PROV	READER	SOUGHT	THINKER
PHILOSOPHER	UNDERSTOOD	SCIENCE	SCIENTIFIC	INDUCTIVE
DEDUCTIVE	EVIDENCE	EVIDENT	FORMULA	FORMULATION
CORRECT	CORRELAT	CORRELATION	ANALYSIS	ANALYSES
DISCREPANCY	DISCREPANCIES	DEFINITION	DEFINITIONAL	REINFORC
REINFORCEMENT	CONSISTENT	INCONSISTENT	PRODUCTIVE	ROLE
DISCLOSURE	CONTINGENT	CONTINGENCY	CONTINGENCIES	INDOCTRINAT
INDOCTRINATION	REINDOCTRINAT	MANIFESTATION	NURTURE	AUTHENTIC
PHYSIOLOGICAL	PSYCHOLOGICAL	MALADAPTIVE	RELEVANT	RELEVANCE
IRRELEVANT	IMPERATIVE	DECLARATIVE	INTERROGATIVE	DECISION
INDECISION	INDECISIVE			

SCHOOL REFERENCE WORDS

INSTRUCTOR
PROFESSOR
PROF
TEACHER
ADVISER
COACH
STUDENT
TEST
QUIZ
EXAM
EXAMINATION
MIDTERM
FINAL
MARK
GRADE
CUM
CREDIT
SEMESTER
B
C
D
F
INCOMPLETE
LECTURE
LABORATORY
LAB
MODULE
MOD
COURSE
CLASS
STUDIES
STUDY
PROGRAM
SCHEDULE
REQUIREMENT
ELECTIVE
MAJOR
MINOR
REPORT
PROJECT
ASSIGNMENT
HOMEWORK
UMASS
UNIVERSITY
COLLEGE
SCHOOL
CAMPUS
LIBRARY
CLASSROOM
DORMITORY
MONTAGUE
EDUCATION
COUNSELOR
ENGLISH
MATH
MATHEMATICS
SPANISH
FRENCH
GERMAN
RUSSIAN
GRADUATION
ORIENTATION
GOVERNMENT
HISTORY
SOPHOMORE
FRESHMAN
FROSH
GUIDANCE
WOPE
QUIZZES
FRESHMEN
DORMITORIES
LABORATORIES
HISTORIES

FAMILY REFERENCE WORDS

MOTHER	FATHER	GUARDIAN	STEP-MOTHER	STEP-FATHER
BROTHER	SISTER	STEP-BROTHER	STEP-SISTER	SISTER-IN-LAW
BROTHER-IN-LAW	UNCLE	AUNT	COUSIN	NIECE
NEPHEW	GRANDMOTHER	GRANDFATHER	GRANDPARENT	HOME
HOUSE	FARM	APARTMENT	FLAT	FAMILY
FOLKS	RELATIVES	MOM	DAD	PARENT
DADDY	MOMMY	GRANDMA	GRANDDAD	GRANDPA

APPENDIX D

DECK ARRANGEMENT AND CONTROL CARD WORKSHEETS

DECK ARRANGEMENT FOR RUNNING PROGRAM DISCANAL

1. System cards
2. PROGRAM DISCANAL & SUBROUTINES
3. System cards
4. Control card #1 - Speaker identifications
5. Control card #2 - Format specifications
6. Control card #3 - Title for all analyses
7. Control card #4 - Option selection & subtitle
8. Control card #5 - Master control for individual analysis
9. Control card #6 - Cumulative record specifications
10. Negative affect words card deck
11. Positive affect words card deck
12. Cognitive words card deck
13. School reference words card deck
14. Family reference words card deck
15. Data cards

    If counselor and client identifications are the same in new data deck, use control cards 4, 5 and 6 followed by new data deck; otherwise use control cards 1 thru 6 and follow with new data deck. Each data deck must be followed by an end of file card.

16. End of file card

IBM

FORTRAN Coding Form

PROGRAM DISCANAL CONTROL CARD WORKSHEET #1

PROGRAMMER E. W. PEPYNE

DATE JAN. 1973

PUNCHING INSTRUCTIONS

GRAPHIC

PUNCH

FORTRAN STATEMENT

CONTROL CARD #1 - SPEAKER IDENTIFICATION CARD

NAME OF COUNSELOR

NAME OF CLIENT

*

CONTROL CARD #2 - FORMAT SPECIFICATION CARD

FORMAT OF VERBAL DATA BEING READ IN (80 COLS. MAX.)

PROGRAM READS CARD SEQUENCE NUMBER IN "A" FORMAT (8 DIGIT MAX), THEN VERBAL TEXT IN "A1" FORMAT.

EX. (A4, 1X, 75A1)

* (

CONTROL CARD #3 - TITLE CARD

TITLE OF ALL ANALYSES TO BE PROCESSED IN THIS RUN (80 COLS. MAX.)

*

CONTROL CARD #4 - OPTION SELECTION AND SUBTITLE CARD

OPTION SELECTION NUMBER COL. 1.

SUBTITLE COLS. 2 THRU 80.

* 7

*A standard card form, IBM electro 888157, is available for punching statements from this form

IBM

FORTRAN Coding Form

PROGRAM DISCANAL CONTROL CARD WORKSHEET #2

PROGRAMMER E. W. PEPYNE

DATE JAN. 1973

PUNCHING INSTRUCTIONS

GRAPHIC

PUNCH

COMM. | STATEMENT NUMBER | CONT. | FORTRAN STATEMENT

CONTROL CARD #5 - MASTER CONTROL FOR EACH SEGMENT OF ANALYIS

NUM. OF PEOPLE CONVERSING

1 = PRINT INPUT TEXT

1 = SYMBOLS EXTRACTED 2 = NOT EXTRACTED

YES = REANALYZE PREVIOUS DATA

1 = EXCLUDE WORDS IN PARENS 2 = INCLUDE 3 = INCLUDE & COUNT

NUMBER OF PARTS TO DIVIDE TEXT

NUMBER OF TEXT CHARACTERS INPUT PER DATA CARD

1 = COMPUTE NUMBER OF SENTENCES AND QUESTIONS 0 = NO

1 = USE KEY WORDS FROM PREVIOUS DATA SEGMENT

NUMBER OF NEGATIVE AFFECT WORDS

NUMBER OF POSITIVE AFFECT WORDS

NUMBER OF COGNITIVE WORDS

NUMBER OF SCHOOL REFERENCE WORDS

NUMBER OF FAMILY REFERENCE WORDS

NUMBER OF TOPIC #3 WORDS

NUMBER OF TOPIC #4 WORDS

NUMBER OF TOPIC #5 WORDS

IF ANOTHER DATA SET FOLLOWS THIS ANALYSIS, AND COUNSELOR OR CLIENT IDENTIFICATION DIFFERS, ENTER DIF

1 = PUNCH OUTPUT OF SUMMARY DATA

* 202 2■00 0 ■ ■ ■

*A standard card form, IBM electro 888157, is available for punching statements from this form

IBM

FORTRAN Coding Form

PROGRAM DISCANAL CONTROL CARD WORKSHEET # 3

PROGRAMMER E. W. PEPYNE

DATE JAN. 1973

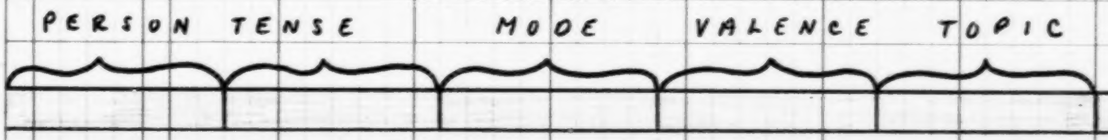
PUNCHING INSTRUCTIONS

GRAPHIC

PUNCH

COMM. STATEMENT NUMBER CONT. FORTRAN STATEMENT

CONTROL CARD #6 - CRITICAL RESPONSE CLASS SPECIFICATIONS FOR
CUMMULATIVE RECORD (LEFT JUSTIFY)



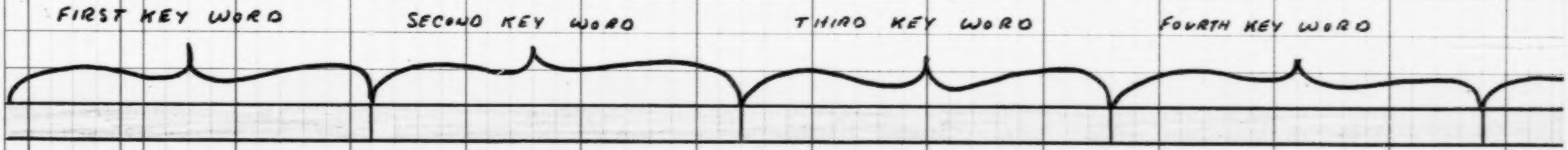
*

KEY WORD CARDS

FIRST CARD - TITLE OF KEY WORD GROUP CLASSIFICATION (80 COLS. MAX.)

*

FOLLOWING CARDS (ALL WORDS LEFT JUSTIFIED)



*

*A standard card form, IBM electro 888157, is available for punching statements from this form.

APPENDIX E

SUMMARIES OF CHANGES IN COUNSELOR AND CLIENT VERBAL BEHAVIOR WITHIN COUNSELING INTERVIEWS

E2

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                      SUMMARY OF VARIABLE STATISTICS
                               FORROGERS

LAUSES
VARIABLE              PER 1 PER 2 PER 3 PER 4 PER 5     MEAN   MAX   MIN    RANGE

  1 AVE CLAUSE LNGTH   10.6   6.5   3.7   6.5   2.4     14.40 17.09 10.58    6.51
  2 PCT. WORDS CONT.   34.0 -12.0  -8.0 -15.0  -8.0     25.40 34.00 19.00   15.00
  3 TYPF/TOKEN RATIO    0.4   0.1  -0.0   0.1   0.0      0.44  0.47  0.39    0.08
  4 AVE WORD LENGTH     3.9  -0.1  -0.1   0.0  -0.0      3.89  3.95  3.83    0.12
  5 PCT CLAUSES CONT   29.0   3.0   3.0  -1.0   3.0     30.60 32.00 28.00    4.00
  6 PCT WORDS-5 LET.   18.0   0.0  -2.0   2.0   2.0     18.40 20.00 16.00    4.00
  7 PCT. 1ST PERSON    42.0  -1.0 -16.0 -12.0 -17.0     32.80 42.00 25.00   17.00
  8 PCT. 2ND PERSON    30.0   2.0  11.0   0.0  16.0     35.80 46.00 30.00   16.00
  9 PCT. 3RD PERSON    27.0   0.0   6.0  13.0   2.0     31.20 40.00 27.00   13.00
 10 PCT. PAST TENSE     0.0   9.0   4.0   0.0   4.0      3.40  9.00  0.00    9.00
 11 PCT PRESENT TNS    94.0  -3.0  -1.0   5.0   2.0     94.60 99.00 91.00    8.00
 12 PCT FUTURE TNS      6.0  -6.0  -2.0  -6.0  -6.0      2.00  6.00  0.00    6.00
 13 PCT NEUT MODE      36.0   9.0  12.0  -1.0  -4.0     39.20 48.00 32.00   16.00
 14 PCT COGNATE MD      3.0   2.0   4.0   7.0   8.0      7.20 11.00  3.00    8.00
 15 PCT AFFECTIVE MD   48.0 -21.0 -11.0  -3.0  -5.0     40.00 48.00 27.00   21.00
 16 PCT MIXED MODE     12.0  11.0  -5.0  -2.0   2.0     13.20 23.00  7.00   16.00
 17 PCT POSITIVE V     24.0  -6.0 -17.0   1.0  -6.0     18.40 25.00  7.00   18.00
 18 PCT NEGATIVE V     21.0 -12.0  -6.0 -16.0  -7.0     12.80 21.00  5.00   16.00
 19 PCT MIXED V        12.0   6.0   3.0   8.0  -5.0     14.40 20.00  7.00   13.00
 20 PCT SCHOOL REF      0.0   0.0   4.0   5.0   0.0      1.80  5.00  0.00    5.00
 21 PCT FAMILY REF      0.0   5.0   4.0   0.0  11.0      4.00 11.00  0.00   11.00
 22 PCT COMBINATION     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 23 PAST/2ST/AFF/POS    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 24 PAST/2ND/AFF/POS    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 25 PAST/3RD/AFF/POS    0.0   0.0   4.0   0.0   0.0      0.80  4.00  0.00    4.00
 26 PRES/1ST/AFF/POS   12.0 -12.0 -12.0  -7.0  -1.0      5.60 12.00  0.00   12.00
 27 PRES/2ND/AFF/POS    6.0   3.0  -6.0   9.0   5.0      8.20 15.00  0.00   15.00
 28 PRES/3RD/AFF/POS    9.0  -4.0  -9.0  -4.0  -5.0      4.60  9.00  0.00    9.00
 29 FUT/1ST/AFF/POS     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 30 FUT/2ND/AFF/POS     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 31 FUT/3RD/AFF/POS     0.0   0.0   4.0   0.0   0.0      0.80  4.00  0.00    4.00
 32 PAST/1ST/AFF/MIX    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 33 PAST/2ND/AFF/MIX    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 34 PAST/3RD/AFF/MIX    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 35 PRES/1ST/AFF/MIX    6.0  -6.0  -6.0  -6.0  -6.0      1.20  6.00  0.00    6.00
 36 PRES/2ND/AFF/MIX    0.0   0.0   7.0  10.0   4.0      4.20 10.00  0.00   10.00
 37 PRES/3RD/AFF/MIX    0.0   5.0   0.0   0.0   0.0      1.00  5.00  0.00    5.00
 38 FUT/1ST/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 39 FUT/2ND/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 40 FUT/3RD/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 41 PAST/1ST/AFF/NEG    0.0   5.0   0.0   0.0   0.0      1.00  5.00  0.00    5.00
 42 PAST/2ND/AFF/NEG    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 43 PAST/3RD/AFF/NEG    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 44 PRES/1ST/AFF/NEG    6.0  -6.0  -2.0  -1.0  -6.0      3.00  6.00  0.00    6.00
 45 PRES/2ND/AFF/NEG   12.0 -12.0  -5.0 -12.0  -8.0      4.60 12.00  0.00   12.00
 46 PRES/3RD/AFF/NEG    0.0   5.0   7.0   0.0   7.0      3.80  7.00  0.00    7.00
 47 FUT/1ST/AFF/NEG     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 48 FUT/2ND/AFF/NEG     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 49 FUT/3RD/AFF/NEG     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 50 PAST/1ST/MIX/POS    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 51 PAST/2ND/MIX/POS    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 52 PAST/3RD/MIX/POS    0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 53 PRES/1ST/MIX/POS    0.0   5.0   0.0   0.0   0.0      1.00  5.00  0.00    5.00
 54 PRES/2ND/MIX/POS    0.0   0.0   0.0   5.0   0.0      1.00  5.00  0.00    5.00
 55 PRES/3RD/MIX/POS    3.0  -3.0  -3.0  -3.0  -3.0      0.60  3.00  0.00    3.00
 56 FUT/1ST/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 57 FUT/2ND/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00  0.00  0.00    0.00
 58 FUT/3RD/MIX/POS    30.0   0.0   0.0   0.0   0.0     30.00 30.00 30.00    0.00
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E3

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 59 PAST/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 60 PAST/2ND/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 61 PAST/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 62 PRES/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 63 PRES/2ND/MIX/MIX       0.0   50.0    0.0    0.0    0.0    10.00  50.00   0.00  50.00
 64 PRES/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 65 FUT/1ST/MIX/MIX       30.0  -30.0  -30.0  -30.0  -30.0     6.00  30.00   0.00  30.00
 66 FUT/2ND/MIX/MIX        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 67 FUT/3RD/MIX/MIX        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 68 PAST/1ST/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 69 PAST/2ND/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 70 PAST/3RD/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 71 PRES/1ST/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 72 PRES/2ND/MIX/NEG       0.0   50.0   40.0    0.0    0.0    18.00  50.00   0.00  50.00
 73 PRES/3RD/MIX/NEG       0.0    0.0    0.0    0.0   70.0    14.00  70.00   0.00  70.00
 74 FUT/1ST/MIX/NEG       30.0  -30.0  -30.0  -30.0  -30.0     6.00  30.00   0.00  30.00
 75 FUT/2ND/MIX/NEG        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 76 FUT/3RD/MIX/NEG        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 77 PAST/1ST/COGNATE       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 78 PAST/2ND/COGNATE       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 79 PAST/3RD/COGNATE       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 80 PRES/1ST/COGNATE       0.0    0.0    0.0    1.0    0.0     0.20   1.00   0.00   1.00
 81 PRES/2ND/COGNATE       0.0   50.0   70.0    0.0   70.0    38.00  70.00   0.00  70.00
 82 PRES/3RD/COGNATE      30.0  -30.0  -30.0  -30.0   40.0    20.00  70.00   0.00  70.00
 83 FUT/1ST/COGNATE        0.0    0.0    0.0   50.0    0.0    10.00  50.00   0.00  50.00
 84 FUT/2ND/COGNATE        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 85 FUT/3RD/COGNATE        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 86 PAST/1ST/NEUTRAL       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 87 PAST/2ND/NEUTRAL       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 88 PAST/3RD/NEUTRAL       0.0   50.0    0.0    0.0   40.0    18.00  50.00   0.00  50.00
 89 PRES/1ST/NEUTRAL       1.0    0.0    0.0    0.0   -1.0     0.80   1.00   0.00   1.00
 90 PRES/2ND/NEUTRAL      80.0    1.0  -68.0  -80.0   -9.0    48.80  81.00   0.00  81.00
 91 PRES/3RD/NEUTRAL      60.0   21.0    1.0  -57.0  -49.0    43.20  81.00   3.00  78.00
 92 FUT/1ST/NEYTRAL       60.0  -20.0   30.0  -60.0   20.0    54.00  90.00   0.00  90.00
 93 FUT/2ND/NEUTRAL        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 94 FUT/3RD/NEUTRAL       30.0  -30.0  -30.0  -30.0  -30.0     6.00  30.00   0.00  30.00
 95 PAST 1ST PERSON        0.0    5.0    0.0    0.0    0.0     1.00   5.00   0.00   5.00
 96 PAST 2ND PERSON        0.0    5.0    0.0    0.0    4.0     1.80   5.00   0.00   5.00
 97 PAST 3RD PERSON        0.0    0.0    4.0    0.0    0.0     0.80   4.00   0.00   4.00
 98 PRES 1ST PERSON       42.0   -6.0  -16.0  -12.0  -17.0    31.80  42.00  25.00  17.00
 99 PRES 2ND PERSON       27.0    0.0   14.0    3.0   16.0    33.60  43.00  27.00  16.00
100 PRES 3RD PERSON       24.0    3.0    2.0   16.0    5.0    29.20  40.00  24.00  16.00
101 FUT 1ST PERSON         0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
102 FUT 2ND PERSON         3.0   -3.0   -3.0   -3.0   -3.0     0.60   3.00   0.00   3.00
103 FUT 3RD PERSON         3.0   -3.0    1.0   -3.0   -3.0     1.40   4.00   0.00   4.00
104 AFFECT POSITIVE       27.0  -13.0  -20.0   -2.0   -2.0    19.60  27.00   7.00  20.00
105 AFFECT MIXED           6.0   -1.0    1.0    4.0   -2.0     6.40  10.00   4.00   6.00
106 AFFECT NEGATIVE       18.0   -9.0    1.0  -13.0   -7.0    12.40  19.00   5.00  14.00
107 MIXED POSITIVE         3.0    2.0   -3.0    2.0   -3.0     2.60   5.00   0.00   5.00
108 MIXED MIXED            3.0    2.0   -3.0   -3.0   -3.0     1.60   5.00   0.00   5.00
109 MIXED NEGATIVE         3.0    2.0    1.0   -3.0    4.0     3.80   7.00   0.00   7.00
110 COGNITIVE              3.0    2.0    4.0   12.0   11.0     8.80  15.00   3.00  12.00
111 NEUTRAL               36.0   19.0   20.0    4.0    3.0    45.20  56.00  36.00  20.00
112 AFFECTIVE TOTAL       52.0  -25.0  -19.0  -12.0  -13.0    38.20  52.00  27.00  25.00
113 MIXED TOTAL            9.0    5.0   -5.0   -4.0   -2.0     7.80  14.00   4.00  10.00
114 AFFECT+MIXED          61.0  -20.0  -24.0  -16.0  -15.0    46.00  61.00  37.00  24.00
115 M.M.S.                 0.0    0.0    0.0    0.0    7.0     1.40   7.00   0.00   7.00
116 ACCENT                 0.0    0.0    0.0    5.0    0.0     1.00   5.00   0.00   5.00
117 RESTATEMENT            3.0    2.0   -3.0    2.0   -3.0     2.60   5.00   0.00   5.00
118 REFLECTION-SIMPL      24.0    8.0    6.0    1.0    5.0    28.00  32.00  24.00   8.00
119 REFLECTION-CONFR       3.0   11.0   -3.0    2.0    4.0     5.80  14.00   0.00  14.00
120 REFLECTION-CAUSA       3.0   -3.0   -3.0    2.0    1.0     2.40   5.00   0.00   5.00
121 INFORMATIONAL         15.0    8.0   11.0   10.0    3.0    21.40  26.00  15.00  11.00
122 IMPERATIVE             0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
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123 PROBE-SIMPLE        9.0    0.0    6.0    1.0    2.0      10.80 15.00  9.00   6.00
124 PROBE-RHETORICAL    0.0    0.0    0.0    0.0    0.0       0.00  0.00  0.00   0.00
125 ABILITY POTENTIA    0.0    0.0    4.0    0.0    4.0       1.60  4.00  0.00   4.00
126 SELF REFERENCE     33.0  -15.0   -7.0  -13.0  -19.0      22.20 33.00 14.00  19.00
127 JOINT IMPERATIVE    0.0    0.0    0.0    0.0    4.0       0.80  4.00  0.00   4.00
128 3RD PERSON INFO     9.0   -9.0   -9.0   -9.0   -5.0       2.60  9.00  0.00   9.00
129 M.M.S. WORDS        0.0    0.0    0.0    0.0    1.0       0.20  1.00  0.00   1.00
130 ACCENT WORDS        0.0    0.0    0.0    0.0    0.0       0.00  0.00  0.00   0.00
131 RESTATE-WORDS       8.0   -6.0   -8.0   -6.0   -8.0       2.40  8.00  0.00   8.00
132 REFL=SIMP WORDS    11.0    9.0    9.3   15.0    2.4      18.13 26.00 11.00  15.00
133 REFL=CONFR WORDS    7.0    9.3   -7.0    9.0   14.0      12.07 21.00  0.00  21.00
134 REFLECT-CAU WORD    8.0   -8.0   -8.0    0.0    6.0       6.00 14.00  0.00  14.00
135 INFO WORDS         13.2   -1.6   -4.3    2.8   -3.0      11.97 16.00  8.86   7.14
136 IMPERAT WORDS       0.0    0.0    0.0    0.0    0.0       0.00  0.00  0.00   0.00
137 PROBE-S WORDS       5.0    8.0    8.5   12.0   14.3      13.57 19.33  5.00  14.33
138 PROBE-RHET WORDS    0.0    0.0    0.0    0.0    0.0       0.00  0.00  0.00   0.00
139 ABIL POT WORDS      0.0    0.0    6.0    0.0   33.0       7.80 33.00  0.00  33.00
140 SELF REF WORDS     11.6   13.6    2.8    6.1   -4.9      15.16 25.25  6.75  18.50
141 JOINT IMP WORDS     0.0    0.0    0.0    0.0   12.0       2.40 12.00  0.00  12.00
142 3RD PER INFO WDS    9.7   -9.7   -9.7   -9.7    8.3       5.53 18.00  0.00  18.00
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E4

E5

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                       SUMMARY OF VARIABLE STATISTICS
                                 FORGLORIA

LAUSES
VARIABLE               PER 1 PER 2 PER 3 PER 4 PER 5      MEAN   MAX    MIN    RANGE

  1 AVE CLAUSE LNGTH    13.2  -3.1  -2.2  -3.2  -3.5     10.78  13.17   9.65   3.52
  2 PCT. WORDS CONT.    66.0  12.0   8.0  15.0   8.0     74.60  81.00  66.00  15.00
  3 TYPE/TOKEN RATIO     0.3   0.0  -0.0   0.0   0.0      0.31   0.32   0.30   0.02
  4 AVE WORD LENGTH      3.6   0.0  -0.0   0.2   0.1      3.67   3.80   3.60   0.20
  5 PCT CLAUSES CONT    71.0  -3.0  -3.0   1.0  -3.0     69.40  72.00  68.00   4.00
  6 PCT WORDS-5 LET.    13.0   3.0  -1.0   5.0   4.0     15.20  18.00  12.00   6.00
  7 PCT. 1ST PERSON     78.0 -14.0 -14.0 -16.0 -17.0     65.80  78.00  61.00  17.00
  8 PCT. 2ND PERSON      3.0   0.0   4.0   3.0   3.0      5.00   7.00   3.00   4.00
  9 PCT. 3RD PERSON     19.0  15.0  10.0  13.0  14.0     29.40  34.00  19.00  15.00
 10 PCT. PAST TENSE     16.0 -13.0 -13.0  -8.0  -6.0      8.00  16.00   3.00  13.00
 11 PCT PRESENT TNS     84.0   7.0   9.0   6.0   5.0     89.40  93.00  84.00   9.00
 12 PCT FUTURE TNS       0.0   6.0   4.0   2.0   1.0      2.60   6.00   0.00   6.00
 13 PCT NEUT MODE       30.0  20.0  21.0  26.0  19.0     47.20  56.00  30.00  26.00
 14 PCT COGNATE MD       3.0   0.0   0.0   0.0   6.0      4.20   9.00   3.00   6.00
 15 PCT AFFECTIVE MD    48.0  -8.0  -8.0 -17.0 -10.0     39.40  48.00  31.00  17.00
 16 PCT MIXED MODE      19.0 -11.0 -12.0 -10.0 -15.0      9.40  19.00   4.00  15.00
 17 PCT POSITIVE V      14.0   4.0   1.0  -4.0   4.0     15.00  18.00  10.00   8.00
 18 PCT NEGATIVE V      34.0 -18.0 -19.0 -17.0 -24.0     18.40  34.00  10.00  24.00
 19 PCT MIXED V         19.0 -16.0 -14.0 -10.0  -6.0      9.80  19.00   3.00  16.00
 20 PCT SCHOOL REF       0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 21 PCT FAMILY REF       5.0  -1.0   2.0  -4.0   4.0      5.20   9.00   1.00   8.00
 22 PCT COMBINATION      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 23 PAST/2ST/AFF/POS     2.0  -1.0  -2.0  -2.0  -1.0      0.80   2.00   0.00   2.00
 24 PAST/2ND/AFF/POS     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 25 PAST/3RD/AFF/POS     2.0  -2.0  -2.0  -2.0  -2.0      0.40   2.00   0.00   2.00
 26 PRES/1ST/AFF/POS     8.0   2.0   5.0   1.0   6.0     10.80  14.00   8.00   6.00
 27 PRES/2ND/AFF/POS     0.0   1.0   1.0   0.0   0.0      0.40   1.00   0.00   1.00
 28 PRES/3RD/AFF/POS     0.0   3.0   3.0   1.0   5.0      2.40   5.00   0.00   5.00
 29 FUT/1ST/AFF/POS      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 30 FUT/2ND/AFF/POS      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 31 FUT/3RD/AFF/POS      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 32 PAST/1ST/AFF/MIX     0.0   0.0   0.0   0.0   3.0      0.60   3.00   0.00   3.00
 33 PAST/2ND/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 34 PAST/3RD/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 35 PRES/1ST/AFF/MIX     9.0  -8.0  -9.0  -9.0  -6.0      2.60   9.00   0.00   9.00
 36 PRES/2ND/AFF/MIX     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 37 PRES/3RD/AFF/MIX     0.0   0.0   0.0   1.0   3.0      0.80   3.00   0.00   3.00
 38 FUT/1ST/AFF/MIX      0.0   0.0   0.0   1.0   0.0      0.20   1.00   0.00   1.00
 39 FUT/2ND/AFF/MIX      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 40 FUT/3RD/AFF/MIX      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 41 PAST/1ST/AFF/NEG     3.0  -3.0  -3.0  -3.0  -3.0      0.60   3.00   0.00   3.00
 42 PAST/2ND/AFF/NEG     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 43 PAST/3RD/AFF/NEG     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 44 PRES/1ST/AFF/NEG    16.0  -7.0  -4.0  -6.0 -11.0     10.40  16.00   5.00  11.00
 45 PRES/2ND/AFF/NEG     0.0   1.0   1.0   0.0   0.0      0.40   1.00   0.00   1.00
 46 PRES/3RD/AFF/NEG     3.0   1.0  -2.0   0.0   1.0      3.00   4.00   1.00   3.00
 47 FUT/1ST/AFF/NEG      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 48 FUT/2ND/AFF/NEG      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 49 FUT/3RD/AFF/NEG      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 50 PAST/1ST/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 51 PAST/2ND/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 52 PAST/3RD/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 53 PRES/1ST/MIX/POS     3.0   0.0  -3.0  -2.0  -3.0      1.40   3.00   0.00   3.00
 54 PRES/2ND/MIX/POS     0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 55 PRES/3RD/MIX/POS     0.0   1.0   0.0   1.0   0.0      0.40   1.00   0.00   1.00
 56 FUT/1ST/MIX/POS      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 57 FUT/2ND/MIX/POS      0.0   0.0   0.0   0.0   0.0      0.00   0.00   0.00   0.00
 58 FUT/3RD/MIX/POS     30.0   0.0   0.0   0.0   0.0     30.00  30.00  30.00   0.00
 59 PAST/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 60 PAST/2ND/MIX/MIX       0.0    0.0    0.0   10.0    0.0      2.00  10.00   0.00   10.00
 61 PAST/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 62 PRES/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 63 PRES/2ND/MIX/MIX      20.0  -20.0   10.0  -10.0  -20.0     12.00  30.00   0.00   30.00
 64 PRES/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 65 FUT/1ST/MIX/MIX        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 66 FUT/2ND/MIX/MIX        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 67 FUT/3RD/MIX/MIX        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 68 PAST/1ST/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 69 PAST/2ND/MIX/NEG      20.0  -20.0  -10.0  -20.0  -20.0      6.00  20.00   0.00   20.00
 70 PAST/3RD/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 71 PRES/1ST/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 72 PRES/2ND/MIX/NEG      80.0  -70.0  -70.0  -50.0  -50.0     32.00  80.00  10.00   70.00
 73 PRES/3RD/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 74 FUT/1ST/MIX/NEG       50.0  -40.0  -50.0  -30.0  -50.0     16.00  50.00   0.00   50.00
 75 FUT/2ND/MIX/NEG        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 76 FUT/3RD/MIX/NEG        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 77 PAST/1ST/COGNATE       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 78 PAST/2ND/COGNATE      20.0  -20.0  -20.0  -10.0  -10.0      8.00  20.00   0.00   20.00
 79 PAST/3RD/GOGNATE       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 80 PRES/1ST/GOGNATE       0.0    0.0    0.0    0.0   10.0      2.00  10.00   0.00   10.00
 81 PRES/2ND/COGNATE      50.0  -20.0  -20.0  -50.0    0.0     32.00  50.00   0.00   50.00
 82 PRES/3RD/COGNATE       0.0    0.0    0.0    0.0   10.0      2.00  10.00   0.00   10.00
 83 FUT/1ST/COGNATE        0.0    0.0   10.0   20.0    0.0      6.00  20.00   0.00   20.00
 84 FUT/2ND/COGNATE        0.0    0.0    0.0    0.0   10.0      2.00  10.00   0.00   10.00
 85 FUT/3RD/COGNATE        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 86 PAST/1ST/NEUTRAL       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 87 PAST/2ND/NEUTRAL      30.0  -20.0  -30.0   20.0    0.0     24.00  50.00   0.00   50.00
 88 PAST/3RD/NEUTRAL       0.0    0.0    0.0    0.0   10.0      2.00  10.00   0.00   10.00
 89 PRES/1ST/NEUTRAL      31.0  -28.0  -19.0  -19.0  -29.0     12.00  31.00   2.00   29.00
 90 PRES/2ND/NEUTRAL      70.0  -60.0   10.0   20.0  -40.0     56.00  90.00  10.00   80.00
 91 PRES/3RD/NEUTRAL      30.0  -28.0   12.0   31.0   12.0     35.40  61.00   2.00   59.00
 92 FUT/1ST/NEYTRAL       60.0  -30.0  -50.0   20.0  -60.0     36.00  80.00   0.00   80.00
 93 FUT/2ND/NEUTRAL        0.0   40.0   30.0    0.0    0.0     14.00  40.00   0.00   40.00
 94 FUT/3RD/NEUTRAL        0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 95 PAST 1ST PERSON       11.0   -8.0  -10.0   -4.0   -3.0      6.00  11.00   1.00   10.00
 96 PAST 2ND PERSON        0.0    0.0    0.0    0.0    1.0      0.20   1.00   0.00    1.00
 97 PAST 3RD PERSON        5.0   -5.0   -4.0   -4.0   -4.0      1.60   5.00   0.00    5.00
 98 PRES 1ST PERSON       67.0   -9.0   -7.0  -13.0  -15.0     58.20  67.00  52.00   15.00
 99 PRES 2ND PERSON        3.0    0.0    4.0    3.0    2.0      4.80   7.00   3.00    4.00
100 PRES 3RD PERSON       14.0   17.0   13.0   16.0   18.0     26.80  32.00  14.00   18.00
101 FUT 1ST PERSON         0.0    4.0    3.0    1.0    1.0      1.80   4.00   0.00    4.00
102 FUT 2ND PERSON         0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
103 FUT 3RD PERSON         0.0    3.0    1.0    1.0    0.0      1.00   3.00   0.00    3.00
104 AFFECT POSITIVE       11.0    4.0    6.0   -1.0    9.0     14.60  20.00  10.00   10.00
105 AFFECT MIXED           9.0   -8.0   -9.0   -7.0   -1.0      4.00   9.00   0.00    9.00
106 AFFECT NEGATIVE       22.0   -8.0   -7.0   -8.0  -13.0     14.80  22.00   9.00   13.00
107 MIXED POSITIVE         3.0    1.0   -3.0   -1.0   -3.0      1.80   4.00   0.00    4.00
108 MIXED MIXED            2.0   -2.0    1.0    0.0   -2.0      1.40   3.00   0.00    3.00
109 MIXED NEGATIVE        14.0  -11.0  -11.0   -8.0  -11.0      5.80  14.00   3.00   11.00
110 COGNITIVE              6.0   -3.0   -2.0   -3.0    4.0      5.20  10.00   3.00    7.00
111 NEUTRAL               33.0   28.0   26.0   27.0   18.0     52.80  61.00  33.00   28.00
112 AFFECTIVE TOTAL       42.0  -12.0  -10.0  -16.0   -5.0     33.40  42.00  26.00   16.00
113 MIXED TOTAL           19.0  -13.0  -14.0   -9.0  -16.0      8.60  19.00   3.00   16.00
114 AFFECT+MIXED          61.0  -25.0  -24.0  -24.0  -22.0     42.00  61.00  36.00   25.00
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E6

E7

SUMMARY OF VARIABLE STATISTICS
FORPERLS

LAUSES VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	6.1	-0.3	0.7	0.7	1.4	6.63	7.51	5.86	1.65
2 PCT. WORDS CONT.	48.0	2.0	-7.0	-3.0	-4.0	45.60	50.00	41.00	9.00
3 TYPE/TOKEN RATIO	0.4	0.0	0.1	0.1	-0.0	0.40	0.44	0.36	0.08
4 AVE WORD LENGTH	3.6	0.2	0.2	0.1	0.2	3.78	3.87	3.63	0.24
5 PCT CLAUSES CONT	44.0	-3.0	-4.0	-9.0	0.0	40.80	44.00	35.00	9.00
6 PCT WORDS-5 LET.	14.0	1.0	5.0	2.0	2.0	16.00	19.00	14.00	5.00
7 PCT. 1ST PERSON	10.0	10.0	15.0	18.0	16.0	21.80	28.00	10.00	18.00
8 PCT. 2ND PERSON	67.0	-30.0	-27.0	-13.0	-20.0	49.00	67.00	37.00	30.00
9 PCT. 3RD PERSON	24.0	19.0	11.0	-6.0	4.0	29.60	43.00	18.00	25.00
10 PCT. PAST TENSE	4.0	6.0	-1.0	9.0	0.0	6.80	13.00	3.00	10.00
11 PCT PRESENT TNS	94.0	-4.0	4.0	-7.0	2.0	93.00	98.00	87.00	11.00
12 PCT FUTURE TNS	2.0	-2.0	-2.0	-2.0	-2.0	0.40	2.00	0.00	2.00
13 PCT NEUT MODE	71.0	0.0	-16.0	-7.0	-9.0	64.60	71.00	55.00	16.00
14 PCT COGNATE MD	4.0	4.0	6.0	-1.0	2.0	6.20	10.00	3.00	7.00
15 PCT AFFECTIVE MD	24.0	-4.0	4.0	9.0	6.0	27.00	33.00	20.00	13.00
16 PCT MIXED MODE	2.0	-2.0	6.0	-2.0	0.0	2.40	8.00	0.00	8.00
17 PCT POSITIVE V	6.0	-4.0	4.0	7.0	0.0	7.40	13.00	2.00	11.00
18 PCT NEGATIVE V	18.0	-8.0	5.0	-3.0	-3.0	16.20	23.00	10.00	13.00
19 PCT MIXED V	0.0	0.0	0.0	10.0	17.0	5.40	17.00	0.00	17.00
20 PCT SCHOOL REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
21 PCT FAMILY REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
22 PCT COMBINATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
25 PAST/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
26 PRES/1ST/AFF/POS	0.0	2.0	0.0	3.0	0.0	1.00	3.00	0.00	3.00
27 PRES/2ND/AFF/POS	4.0	-4.0	-1.0	1.0	0.0	3.20	5.00	0.00	5.00
28 PRES/3RD/AFF/POS	2.0	-2.0	6.0	1.0	-2.0	2.60	8.00	0.00	8.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
32 PAST/1ST/AFF/MIX	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
36 PRES/2ND/AFF/MIX	0.0	0.0	0.0	0.0	6.0	1.20	6.00	0.00	6.00
37 PRES/3RD/AFF/MIX	0.0	0.0	0.0	0.0	2.0	0.40	2.00	0.00	2.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
42 PAST/2ND/AFF/NEG	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
43 PAST/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
44 PRES/1ST/AFF/NEG	0.0	2.0	3.0	8.0	4.0	3.40	8.00	0.00	8.00
45 PRES/2ND/AFF/NEG	10.0	-4.0	-2.0	-5.0	-4.0	7.00	10.00	5.00	5.00
46 PRES/3RD/AFF/NEG	8.0	-6.0	-3.0	-5.0	-4.0	4.40	8.00	2.00	6.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	0.0	0.0	0.0	0.0	2.0	0.40	2.00	0.00	2.00
54 PRES/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
55 PRES/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
57 FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00

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 58 FUT/3RD/MIX/POS     30.0    0.0    0.0    0.0    0.0     30.00  30.00  30.00   0.00
 59 PAST/1ST/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 60 PAST/2ND/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 61 PAST/3RD/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 62 PRES/1ST/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 63 PRES/2ND/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 64 PRES/3RD/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 65 FUT/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 66 FUT/2ND/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 67 FUT/3RD/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 68 PAST/1ST/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 69 PAST/2ND/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 70 PAST/3RD/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 71 PRES/1ST/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 72 PRES/2ND/MIX/NEG     0.0    0.0   50.0    0.0    0.0     10.00  50.00   0.00  50.00
 73 PRES/3RD/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 74 FUT/1ST/MIX/NEG      0.0    0.0   30.0    0.0    0.0      6.00  30.00   0.00  30.00
 75 FUT/2ND/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 76 FUT/3RD/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 77 PAST/1ST/COGNATE     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 78 PAST/2ND/COGNATE     0.0   40.0    0.0    0.0   40.0     16.00  40.00   0.00  40.00
 79 PAST/3RD/GOGNATE     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 80 PRES/1ST/GOGNATR     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 81 PRES/2ND/COGNATE    20.0    0.0   30.0  -20.0    0.0     22.00  50.00   0.00  50.00
 82 PRES/3RD/COGNATE    20.0  -20.0  -20.0   10.0  -20.0     10.00  30.00   0.00  30.00
 83 FUT/1ST/COGNATE      0.0   20.0   50.0    0.0    0.0     14.00  50.00   0.00  50.00
 84 FUT/2ND/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 85 FUT/3RD/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 86 PAST/1ST/NEUTRAL     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 87 PAST/2ND/NEUTRAL     0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 88 PAST/3RD/NEUTRAL    40.0   20.0  -40.0   40.0  -40.0     36.00  80.00   0.00  80.00
 89 PRES/1ST/NEUTRAL     0.0    1.0    1.0    1.0    1.0      0.80   1.00   0.00   1.00
 90 PRES/2ND/NEUTRAL    64.0  -62.0  -32.0  -31.0  -31.0     32.80  64.00   2.00  62.00
 91 PRES/3RD/NEUTRAL    71.0  -28.0   10.0  -60.0  -69.0     41.60  81.00   2.00  79.00
 92 FUT/1ST/NEYTRAL     40.0   50.0   10.0  -10.0  -30.0     44.00  90.00  10.00  80.00
 93 FUT/2ND/NEUTRAL     20.0  -20.0  -20.0  -20.0  -20.0      4.00  20.00   0.00  20.00
 94 FUT/3RD/NEUTRAL      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 95 PAST 1ST PERSON      0.0    4.0    0.0    3.0    4.0      2.20   4.00   0.00   4.00
 96 PAST 2ND PERSON      4.0    2.0   -1.0    6.0   -4.0      4.60  10.00   0.00  10.00
 97 PAST 3RD PERSON      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
 98 PRES 1ST PERSON      8.0    8.0   17.0   18.0   13.0     19.20  26.00   8.00  18.00
 99 PRES 2ND PERSON     63.0  -32.0  -25.0  -19.0  -16.0     44.60  63.00  31.00  32.00
100 PRES 3RD PERSON     24.0   19.0   11.0   -6.0    4.0     29.60  43.00  18.00  25.00
101 FUT 1ST PERSON       2.0   -2.0   -2.0   -2.0   -2.0      0.40   2.00   0.00   2.00
102 FUT 2ND PERSON       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
103 FUT 3RD PERSON       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
104 AFFECT POSITIVE      6.0   -4.0    4.0    7.0   -2.0      7.00  13.00   2.00  11.00
105 AFFECT MIXED         0.0    0.0    0.0    5.0    9.0      2.80   9.00   0.00   9.00
106 AFFECT NEGATIVE     18.0   -8.0    0.0   -3.0   -3.0     15.20  18.00  10.00   8.00
107 MIXED POSITIVE       0.0    0.0    0.0    0.0    2.0      0.40   2.00   0.00   2.00
108 MIXED MIXED          0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00   0.00
109 MIXED NEGATIVE       0.0    0.0    8.0    0.0    0.0      1.60   8.00   0.00   8.00
110 COGNITIVE            4.0    4.0    6.0   -1.0    2.0      6.20  10.00   3.00   7.00
111 NEUTRAL             73.0    7.0  -18.0   -9.0   -9.0     67.20  80.00  55.00  25.00
112 AFFECTIVE TOTAL     24.0  -12.0    4.0    9.0    4.0     25.00  33.00  12.00  21.00
113 MIXED TOTAL          0.0    0.0    8.0    0.0    2.0      2.00   8.00   0.00   8.00
114 AFFECT+MIXED        24.0  -12.0   11.0    9.0    6.0     26.80  35.00  12.00  23.00
115 M.M.S.               8.0    2.0    5.0   -5.0   -2.0      8.00  13.00   3.00  10.00
116 ACCENT               2.0    0.0   -2.0   -2.0   -2.0      0.80   2.00   0.00   2.00
117 RESTATEMENT          4.0   -2.0    4.0   -1.0    7.0      5.60  11.00   2.00   9.00
118 REFLECTION-SIMPL    31.0  -15.0  -18.0   -3.0  -18.0     20.20  31.00  13.00  18.00
119 REFLECTION-CONFR     4.0   -4.0   -1.0   -1.0   -4.0      2.00   4.00   0.00   4.00
120 REFLECTION-CAUSA     2.0   -2.0    1.0   -2.0   -2.0      1.00   3.00   0.00   3.00
121 INFORMATIONAL        4.0   25.0   16.0    9.0    5.0     15.00  29.00   4.00  25.00
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122 IMPERATIVE            4.0    0.0    4.0    9.0    0.0       6.60  13.00   4.00    9.00
123 PROBE-SIMPLE         31.0   -9.0  -16.0  -13.0    5.0      24.40  36.00  15.00   21.00
124 PROBE-RHETORICAL      2.0   -2.0   -2.0   -2.0   -2.0       0.40   2.00   0.00    2.00
125 ABILITY POTENTIA      2.0   -2.0   -2.0   -2.0    0.0       0.80   2.00   0.00    2.00
126 SELF REFERENCE        6.0    6.0   14.0   15.0   13.0      15.60  21.00   6.00   15.00
127 JOINT IMPERATIVE      0.0    2.0    0.0    0.0    0.0       0.40   2.00   0.00    2.00
128 3RD PERSON INFO       0.0    0.0    0.0    0.0    0.0       0.00   0.00   0.00    0.00
129 M.M.S. WORDS          1.0    0.0    0.0    0.0    0.0       1.00   1.00   1.00    0.00
130 ACCENT WORDS          2.0    0.0   -2.0   -2.0   -2.0       0.80   2.00   0.00    2.00
131 RESTATE-WORDS         2.5    2.5    2.5    0.5    3.3       4.26   5.80   2.50    3.30
132 REFL-SIMP WORDS       5.9    2.7    5.7    1.9    1.6       8.29  11.60   5.88    5.72
133 REFL-CONFR WORDS      6.0   -6.0   10.0    0.0   -6.0       5.60  16.00   0.00   16.00
134 REFLECT-CAU WORD     16.0  -16.0    5.0  -16.0  -16.0       7.40  21.00   0.00   21.00
135 INFO WORDS            7.0   -1.6   -0.4   -1.4    0.3       6.37   7.25   5.36    1.89
136 IMPERAT WORDS         4.5    0.5   -1.8   -0.9   -1.0       3.85   5.00   2.67    2.33
137 PROBE-S WORDS         7.1   -0.7   -0.6   -1.0    1.0       6.88   8.18   6.14    2.04
138 PROBE-RHET WORDS      4.0   -4.0   -4.0   -4.0   -4.0       0.80   4.00   0.00    4.00
139 ABIL POT WORDS        9.0   -9.0   -9.0   -9.0    9.0       5.40  18.00   0.00   18.00
140 SELF REF WORDS        9.7   -2.3   -2.3    0.5   -0.4       8.75  10.13   7.33    2.80
141 JOINT IMP WORDS       0.0    6.0    0.0    0.0    0.0       1.20   6.00   0.00    6.00
142 3RD PER INFO WDS      0.0    0.0    0.0    0.0    0.0       0.00   0.00   0.00    0.00
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                    SUMMARY OF VARIABLE STATISTICS
                             FORGLORIA

CLAUSES
VARIABLE
                         PER 1 PER 2 PER 3 PER 4 PER 5      MEAN    MAX    MIN     RANGE

  1 AVE CLAUSE LNGTH       7.2    1.1   -0.1    3.2    0.1    8.09  10.40   7.12    3.28
  2 PCT. WORDS CONT.      52.0   -2.0    7.0    3.0    4.0   54.40  59.00  50.00    9.00
  3 TYPE/TOKEN RATIO       0.4   -0.0   -0.0   -0.0   -0.0    0.34   0.36   0.32    0.04
  4 AVE WORD LENGTH        3.7   -0.1    0.1    0.0   -0.0    3.66   3.79   3.53    0.26
  5 PCT CLAUSES CONT      56.0    3.0    4.0    9.0    0.0   59.20  65.00  56.00    9.00
  6 PCT WORDS-5 LET.      17.0   -5.0    1.0   -4.0   -5.0   14.40  18.00  12.00    6.00
  7 PCT. 1ST PERSON       54.0    5.0   -1.0    4.0  -10.0   53.60  59.00  44.00   15.00
  8 PCT. 2ND PERSON        9.0    5.0   12.0    4.0   16.0   16.40  25.00   9.00   16.00
  9 PCT. 3RD PERSON       38.0  -11.0  -12.0   -9.0   -7.0   30.20  38.00  26.00   12.00
 10 PCT. PAST TENSE        4.0    4.0   -2.0    2.0    4.0    5.60   8.00   2.00    6.00
 11 PCT PRESENT TNS       95.0   -3.0    2.0   -1.0   -6.0   93.40  97.00  89.00    8.00
 12 PCT FUTURE TNS         2.0   -2.0    0.0   -2.0    1.0    1.40   3.00   0.00    3.00
 13 PCT NEUT MODE         50.0    9.0    3.0  -17.0   14.0   51.80  64.00  33.00   31.00
 14 PCT COGNATE MD         4.0    2.0   -2.0   -2.0    1.0    3.80   6.00   2.00    4.00
 15 PCT AFFECTIVE MD      41.0  -12.0   -7.0   15.0  -16.0   37.00  56.00  25.00   31.00
 16 PCT MIXED MODE         5.0    1.0    5.0    3.0    2.0    7.20  10.00   5.00    5.00
 17 PCT POSITIVE V         9.0   -5.0    0.0   -1.0   -2.0    7.40   9.00   4.00    5.00
 18 PCT NEGATIVE V        23.0   -7.0   -2.0   -6.0  -13.0   17.40  23.00  10.00   13.00
 19 PCT MIXED V            4.0    0.0   -1.0    9.0    3.0    6.20  13.00   3.00   10.00
 20 PCT SCHOOL REF         0.0    2.0    2.0    0.0    0.0    0.80   2.00   0.00    2.00
 21 PCT FAMILY REF         0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 22 PCT COMBINATION        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 23 PAST/2ST/AFF/POS       0.0    0.0    0.0    0.0    2.0    0.40   2.00   0.00    2.00
 24 PAST/2ND/AFF/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 25 PAST/3RD/AFF/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 26 PRES/1ST/AFF/POS       4.0   -2.0    1.0   -2.0   -2.0    3.00   5.00   2.00    3.00
 27 PRES/2ND/AFF/POS       0.0    2.0    0.0    6.0    0.0    1.60   6.00   0.00    6.00
 28 PRES/3RD/AFF/POS       4.0   -4.0   -2.0    0.0   -1.0    2.60   4.00   0.00    4.00
 29 FUT/1ST/AFF/POS        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 30 FUT/2ND/AFF/POS        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 31 FUT/3RD/AFF/POS        0.0   -0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 32 PAST/1ST/AFF/MIX       2.0   -2.0   -2.0   -2.0   -2.0    0.40   2.00   0.00    2.00
 33 PAST/2ND/AFF/MIX       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 34 PAST/3RD/AFF/MIX       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 35 PRES/1ST/AFF/MIX       0.0    0.0    0.0    6.0    2.0    1.60   6.00   0.00    6.00
 36 PRES/2ND/AFF/MIX       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 37 PRES/3RD/AFF/MIX       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 38 FUT/1ST/AFF/MIX        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 39 FUT/2ND/AFF/MIX        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 40 FUT/3RD/AFF/MIX        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 41 PAST/1ST/AFF/NEG       0.0    4.0    0.0    2.0    0.0    1.20   4.00   0.00    4.00
 42 PAST/2ND/AFF/NEG       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 43 PAST/3RD/AFF/NEG       0.0    2.0    0.0    2.0    0.0    0.80   2.00   0.00    2.00
 44 PRES/1ST/AFF/NEG      23.0  -13.0   -9.0   -8.0  -20.0   13.00  23.00   3.00   20.00
 45 PRES/2ND/AFF/NEG       0.0    2.0    0.0    0.0    3.0    1.00   3.00   0.00    3.00
 46 PRES/3RD/AFF/NEG       2.0    0.0    1.0    0.0   -2.0    1.80   3.00   0.00    3.00
 47 FUT/1ST/AFF/NEG        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 48 FUT/2ND/AFF/NEG        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 49 FUT/3RD/AFF/NEG        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 50 PAST/1ST/MIX/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 51 PAST/2ND/MIX/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 52 PAST/3RD/MIX/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 53 PRES/1ST/MIX/POS       2.0   -2.0   -2.0   -2.0   -2.0    0.40   2.00   0.00    2.00
 54 PRES/2ND/MIX/POS       0.0    0.0    2.0    0.0    0.0    0.40   2.00   0.00    2.00
 55 PRES/3RD/MIX/POS       0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 56 FUT/1ST/MIX/POS        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 57 FUT/2ND/MIX/POS        0.0    0.0    0.0    0.0    0.0    0.00   0.00   0.00    0.00
 58 FUT/3RD/MIX/POS      30.0    0.0    0.0    0.0    0.0     30.00  30.00  30.00    0.00
 59 PAST/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 60 PAST/2ND/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 61 PAST/3RD/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 62 PRES/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 63 PRES/2ND/MIX/MIX      0.0   20.0    0.0    0.0   20.0      8.00  20.00   0.00   20.00
 64 PRES/3RD/MIX/MIX      0.0    0.0   20.0    0.0    0.0      4.00  20.00   0.00   20.00
 65 FUT/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 66 FUT/2ND/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 67 FUT/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 68 PAST/1ST/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 69 PAST/2ND/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 70 PAST/3RD/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 71 PRES/1ST/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 72 PRES/2ND/MIX/NEG      0.0    0.0    0.0   40.0   20.0     12.00  40.00   0.00   40.00
 73 PRES/3RD/MIX/NEG     20.0  -20.0   10.0  -20.0  -20.0     10.00  30.00   0.00   30.00
 74 FUT/1ST/MIX/NEG       0.0    0.0   20.0    0.0   20.0      8.00  20.00   0.00   20.00
 75 FUT/2ND/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 76 FUT/3RD/MIX/NEG       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 77 PAST/1ST/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 78 PAST/2ND/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 79 PAST/3RD/GOGNATE      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 80 PRES/1ST/GOGNATR      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 81 PRES/2ND/COGNATE      0.0   60.0   30.0   40.0   70.0     40.00  70.00   0.00   70.00
 82 PRES/3RD/COGNATE      0.0    0.0   20.0    0.0    0.0      4.00  20.00   0.00   20.00
 83 FUT/1ST/COGNATE      40.0  -40.0  -40.0  -40.0  -40.0      8.00  40.00   0.00   40.00
 84 FUT/2ND/COGNATE       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 85 FUT/3RD/COGNATE       0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 86 PAST/1ST/NEUTRAL      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 87 PAST/2ND/NEUTRAL      0.0    0.0    0.0    0.0    0.0      0.00   0.00   0.00    0.00
 88 PAST/3RD/NEUTRAL      0.0   20.0   20.0   20.0   30.0     18.00  30.00   0.00   30.00
 89 PRES/1ST/NEUTRAL     22.0  -19.0  -19.0  -20.0   10.0     12.40  32.00   2.00   30.00
 90 PRES/2ND/NEUTRAL     10.0   40.0    0.0   40.0   51.0     36.20  61.00  10.00   51.00
 91 PRES/3RD/NEUTRAL     72.0   10.0   19.0  -30.0   10.0     73.80  91.00  42.00   49.00
 92 FUT/1ST/NEYTRAL      70.0  -50.0   20.0  -60.0  -70.0     38.00  90.00   0.00   90.00
 93 FUT/2ND/NEUTRAL      20.0  -20.0  -20.0  -20.0  -20.0      4.00  20.00   0.00   20.00
 94 FUT/3RD/NEUTRAL       0.0    0.0   20.0    0.0    0.0      4.00  20.00   0.00   20.00
 95 PAST 1ST PERSON       2.0    2.0   -2.0    0.0    0.0      2.00   4.00   0.00    4.00
 96 PAST 2ND PERSON       0.0    2.0    2.0    2.0    3.0      1.80   3.00   0.00    3.00
 97 PAST 3RD PERSON       2.0    0.0   -2.0    0.0    1.0      1.80   3.00   0.00    3.00
 98 PRES 1ST PERSON      50.0    5.0    3.0    6.0   -7.0     51.40  56.00  43.00   13.00
 99 PRES 2ND PERSON       9.0    3.0    8.0    1.0   12.0     13.80  21.00   9.00   12.00
100 PRES 3RD PERSON      36.0  -12.0  -10.0   -9.0  -11.0     27.60  36.00  24.00   12.00
101 FUT 1ST PERSON        2.0   -2.0   -2.0   -2.0   -2.0      0.40   2.00   0.00    2.00
102 FUT 2ND PERSON        0.0    0.0    2.0    0.0    0.0      0.40   2.00   0.00    2.00
103 FUT 3RD PERSON        0.0    0.0    0.0    0.0    3.0      0.60   3.00   0.00    3.00
104 AFFECT POSITIVE       7.0   -3.0    0.0    6.0    0.0      7.60  13.00   4.00    9.00
105 AFFECT MIXED          2.0   -2.0   -2.0    4.0    0.0      2.00   6.00   0.00    6.00
106 AFFECT NEGATIVE      25.0   -5.0   -8.0   -4.0  -18.0     18.00  25.00   7.00   18.00
107 MIXED POSITIVE        2.0   -2.0    0.0   -2.0   -2.0      0.80   2.00   0.00    2.00
108 MIXED MIXED           0.0    2.0    2.0    0.0    2.0      1.20   2.00   0.00    2.00
109 MIXED NEGATIVE        2.0   -2.0    3.0    2.0    1.0      2.80   5.00   0.00    5.00
110 COGNITIVE             4.0    2.0    1.0    0.0    3.0      5.20   7.00   4.00    3.00
111 NEUTRAL              59.0    8.0    3.0   -7.0   15.0     62.80  74.00  52.00   22.00
112 AFFECTIVE TOTAL      34.0  -10.0  -10.0    6.0  -19.0     27.40  40.00  15.00   25.00
113 MIXED TOTAL           4.0   -2.0    5.0    0.0    1.0      4.80   9.00   2.00    7.00
114 AFFECT+MIXED         38.0  -11.0   -5.0    6.0  -18.0     32.40  44.00  20.00   24.00
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E11

SUMMARY OF VARIABLE STATISTICS
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E 12

LAUSES VARIABLE	PER 1	PER 2	PER 3	PER 4	PER 5	MEAN	MAX	MIN	RANGE
1 AVE CLAUSE LNGTH	12.5	1.8	0.2	7.6	4.1	15.23	20.13	12.48	7.65
2 PCT. WORDS CONT.	38.0	21.0	23.0	44.0	34.0	62.40	82.00	38.00	44.00
3 TYPE/TOKEN RATIO	0.5	-0.1	-0.1	-0.1	-0.1	0.42	0.49	0.39	0.10
4 AVE WORD LENGTH	4.4	-0.4	-0.4	-0.8	-0.4	3.97	4.36	3.52	0.84
5 PCT CLAUSES CONT	38.0	28.0	27.0	58.0	38.0	68.20	96.00	38.00	58.00
6 PCT WORDS-5 LET.	26.0	-9.0	-4.0	-9.0	-6.0	20.40	26.00	17.00	9.00
7 PCT. 1ST PERSON	9.0	7.0	5.0	13.0	15.0	17.00	24.00	9.00	15.00
8 PCT. 2ND PERSON	78.0	-44.0	-24.0	-22.0	-25.0	55.00	78.00	34.00	44.00
9 PCT. 3RD PERSON	13.0	37.0	18.0	9.0	11.0	28.00	50.00	13.00	37.00
10 PCT. PAST TENSE	4.0	-1.0	5.0	-4.0	4.0	4.80	9.00	0.00	9.00
11 PCT PRESENT TNS	91.0	6.0	-2.0	0.0	-4.0	91.00	97.00	87.00	10.00
12 PCT FUTURE TNS	4.0	-4.0	-1.0	2.0	1.0	3.60	6.00	0.00	6.00
13 PCT NEUT MODE	39.0	11.0	18.0	24.0	14.0	52.40	63.00	39.00	24.00
14 PCT COGNATE MD	13.0	-7.0	-10.0	-4.0	-8.0	7.20	13.00	3.00	10.00
15 PCT AFFECTIVE MD	26.0	5.0	-6.0	-13.0	6.0	24.40	32.00	13.00	19.00
16 PCT MIXED MODE	22.0	-9.0	-2.0	-6.0	-11.0	16.40	22.00	11.00	11.00
17 PCT POSITIVE V	4.0	9.0	5.0	5.0	20.0	11.80	24.00	4.00	20.00
18 PCT NEGATIVE V	35.0	-16.0	-9.0	-19.0	-24.0	21.40	35.00	11.00	24.00
19 PCT MIXED V	9.0	4.0	-9.0	-3.0	-9.0	5.60	13.00	0.00	13.00
20 PCT SCHOOL REF	0.0	0.0	0.0	6.0	3.0	1.80	6.00	0.00	6.00
21 PCT FAMILY REF	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
22 PCT COMBINATION	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
23 PAST/2ST/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
24 PAST/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
25 PAST/3RD/AFF/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
26 PRES/1ST/AFF/POS	0.0	9.0	3.0	0.0	3.0	3.00	9.00	0.00	9.00
27 PRES/2ND/AFF/POS	0.0	3.0	0.0	3.0	11.0	3.40	11.00	0.00	11.00
28 PRES/3RD/AFF/POS	0.0	0.0	0.0	0.0	5.0	1.00	5.00	0.00	5.00
29 FUT/1ST/AFF/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
30 FUT/2ND/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
31 FUT/3RD/AFF/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
32 PAST/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
33 PAST/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
34 PAST/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
35 PRES/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
36 PRES/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
37 PRES/3RD/AFF/MIX	0.0	3.0	0.0	0.0	0.0	0.60	3.00	0.00	3.00
38 FUT/1ST/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
39 FUT/2ND/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
40 FUT/3RD/AFF/MIX	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
41 PAST/1ST/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
42 PAST/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
43 PAST/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
44 PRES/1ST/AFF/NEG	0.0	0.0	0.0	0.0	5.0	1.00	5.00	0.00	5.00
45 PRES/2ND/AFF/NEG	26.0	-26.0	-12.0	-23.0	-21.0	9.60	26.00	0.00	26.00
46 PRES/3RD/AFF/NEG	0.0	13.0	0.0	3.0	3.0	3.80	13.00	0.00	13.00
47 FUT/1ST/AFF/NEG	0.0	0.0	0.0	3.0	0.0	0.60	3.00	0.00	3.00
48 FUT/2ND/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
49 FUT/3RD/AFF/NEG	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
50 PAST/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
51 PAST/2ND/MIX/POS	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
52 PAST/3RD/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
53 PRES/1ST/MIX/POS	0.0	0.0	0.0	0.0	3.0	0.60	3.00	0.00	3.00
54 PRES/2ND/MIX/POS	4.0	-4.0	-4.0	2.0	-4.0	2.00	6.00	0.00	6.00
55 PRES/3RD/MIX/POS	0.0	0.0	3.0	0.0	0.0	0.60	3.00	0.00	3.00
56 FUT/1ST/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
57 FUT/2ND/MIX/POS	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
58 FUT/3RD/MIX/POS	30.0	0.0	0.0	0.0	0.0	30.00	30.00	30.00	0.00

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 59 PAST/1ST/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 60 PAST/2ND/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 61 PAST/3RD/MIX/MIX    40.0  -40.0  -40.0  -40.0  -40.0      8.00 40.00  0.00  40.00
 62 PRES/1ST/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 63 PRES/2ND/MIX/MIX     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 64 PRES/3RD/MIX/MIX     0.0   30.0    0.0   30.0    0.0     12.00 30.00  0.00  30.00
 65 FUT/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 66 FUT/2ND/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 67 FUT/3RD/MIX/MIX      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 68 PAST/1ST/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 69 PAST/2ND/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 70 PAST/3RD/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 71 PRES/1ST/MIX/NEG     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 72 PRES/2ND/MIX/NEG     0.0    0.0    1.0    0.0    0.0      0.20  1.00  0.00   1.00
 73 PRES/3RD/MIX/NEG    40.0   20.0  -30.0   20.0  -10.0     40.00 60.00 10.00  50.00
 74 FUT/1ST/MIX/NEG     90.0  -90.0  -60.0  -90.0  -90.0     24.00 90.00  0.00  90.00
 75 FUT/2ND/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 76 FUT/3RD/MIX/NEG      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 77 PAST/1ST/COGNATE     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 78 PAST/2ND/COGNATE     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 79 PAST/3RD/GOGNATE     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 80 PRES/1ST/GOGNATR     0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 81 PRES/2ND/COGNATE    40.0  -10.0  -10.0  -10.0  -40.0     26.00 40.00  0.00  40.00
 82 PRES/3RD/COGNATE    90.0  -60.0  -90.0  -30.0  -40.0     46.00 90.00  0.00  90.00
 83 FUT/1ST/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 84 FUT/2ND/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 85 FUT/3RD/COGNATE      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
 86 PAST/1ST/NEUTRAL     0.0    0.0    0.0   30.0    0.0      6.00 30.00  0.00  30.00
 87 PAST/2ND/NEUTRAL     0.0    0.0   30.0    0.0    0.0      6.00 30.00  0.00  30.00
 88 PAST/3RD/NEUTRAL     0.0    0.0   30.0    0.0   50.0     16.00 50.00  0.00  50.00
 89 PRES/1ST/NEUTRAL     0.0   30.0    0.0    0.0    0.0      6.00 30.00  0.00  30.00
 90 PRES/2ND/NEUTRAL    42.0  -11.0  -10.0   50.0   40.0     55.80 92.00 31.00  61.00
 91 PRES/3RD/NEUTRAL    60.0   33.0  -28.0   21.0  -19.0     61.40 93.00 32.00  61.00
 92 FUT/1ST/NEYTRAL     40.0  -30.0   20.0   50.0  -10.0     46.00 90.00 10.00  80.00
 93 FUT/2ND/NEUTRAL      0.0    0.0   30.0   30.0   30.0     18.00 30.00  0.00  30.00
 94 FUT/3RD/NEUTRAL     40.0  -40.0  -40.0  -40.0  -40.0      8.00 40.00  0.00  40.00
 95 PAST 1ST PERSON      0.0    0.0    3.0    0.0    0.0      0.60  3.00  0.00   3.00
 96 PAST 2ND PERSON      4.0   -4.0    2.0   -4.0    1.0      3.00  6.00  0.00   6.00
 97 PAST 3RD PERSON      0.0    3.0    0.0    0.0    3.0      1.20  3.00  0.00   3.00
 98 PRES 1ST PERSON      9.0    7.0    0.0    4.0    9.0     13.00 18.00  9.00   9.00
 99 PRES 2ND PERSON     70.0  -36.0  -21.0  -14.0  -23.0     51.20 70.00 34.00  36.00
100 PRES 3RD PERSON     13.0   34.0   18.0    9.0    8.0     26.80 47.00 13.00  34.00
101 FUT 1ST PERSON       0.0    0.0    3.0    6.0    5.0      2.80  6.00  0.00   6.00
102 FUT 2ND PERSON       4.0   -4.0   -4.0   -4.0   -4.0      0.80  4.00  0.00   4.00
103 FUT 3RD PERSON       0.0    0.0    0.0    3.0    0.0      0.60  3.00  0.00   3.00
104 AFFECT POSITIVE      0.0   13.0    3.0    3.0   24.0      8.60 24.00  0.00  24.00
105 AFFECT MIXED         0.0    3.0    0.0    0.0    0.0      0.60  3.00  0.00   3.00
106 AFFECT NEGATIVE     26.0  -13.0  -12.0  -17.0  -13.0     15.00 26.00  9.00  17.00
107 MIXED POSITIVE       4.0   -4.0    2.0    2.0   -1.0      3.80  6.00  0.00   6.00
108 MIXED MIXED          4.0   -1.0   -4.0   -1.0   -4.0      2.00  4.00  0.00   4.00
109 MIXED NEGATIVE      13.0   -7.0    1.0   -7.0  -10.0      8.40 14.00  3.00  11.00
110 COGNITIVE           13.0   -7.0  -10.0    0.0   -8.0      8.00 13.00  3.00  10.00
111 NEUTRAL             39.0   17.0   21.0   20.0   14.0     53.40 60.00 39.00  21.00
112 AFFECTIVE TOTAL     26.0    2.0   -9.0  -13.0   11.0     24.20 37.00 13.00  24.00
113 MIXED TOTAL         22.0  -13.0   -2.0   -6.0  -17.0     14.40 22.00  5.00  17.00
114 AFFECT+MIXED        48.0  -10.0  -11.0  -20.0   -6.0     38.60 48.00 28.00  20.00
115 M.M.S.               4.0   -4.0   -1.0   -1.0   -1.0      2.60  4.00  0.00   4.00
116 ACCENT               0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
117 RESTATEMENT          4.0   -4.0    2.0   -4.0   -4.0      2.00  6.00  0.00   6.00
118 REFLECTION-SIMPL    26.0  -23.0    3.0    5.0   -5.0     22.00 31.00  3.00  28.00
119 REFLECTION-CONFR     0.0    3.0    6.0    3.0    0.0      2.40  6.00  0.00   6.00
120 REFLECTION-CAUSA     9.0   -3.0   -6.0    0.0   -4.0      6.40  9.00  3.00   6.00
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121 INFORMATIONAL        13.0   25.0    7.0    0.0    3.0     20.00 38.00 13.00  25.00
122 IMPERATIVE            0.0    3.0    3.0    0.0    0.0      1.20  3.00  0.00   3.00
123 PROBE-SIMPLE         13.0    9.0    1.0  -13.0    8.0     14.00 22.00  0.00  22.00
124 PROBE-RHETORICAL      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
125 ABILITY POTENTIA      0.0    0.0    0.0    9.0    5.0      2.80  9.00  0.00   9.00
126 SELF REFERENCE        9.0    7.0    2.0   10.0    9.0     14.60 19.00  9.00  10.00
127 JOINT IMPERATIVE     22.0  -13.0  -16.0  -13.0  -17.0     10.20 22.00  5.00  17.00
128 3RD PERSON INFO       0.0    0.0    0.0    3.0    5.0      1.60  5.00  0.00   5.00
129 M.M.S. WORDS          1.0   -1.0    0.0    0.0    0.0      0.80  1.00  0.00   1.00
130 ACCENT WORDS          0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
131 RESTATE-WORDS         4.0   -4.0    0.0   -4.0   -4.0      1.60  4.00  0.00   4.00
132 REFL-SIMP WORDS      11.2    2.8    3.3    3.4    8.0     14.68 19.13 11.17   7.96
133 REFL-CONFR WORDS      0.0   13.0   11.5   14.0    0.0      7.70 14.00  0.00  14.00
134 REFLECT-CAU WORD     33.0  -11.0   -8.0    4.0   -6.0     28.80 37.00 22.00  15.00
135 INFO WORDS           17.7   -8.2  -11.0   -4.4   -4.5     12.06 17.67  6.71  10.96
136 IMPERAT WORDS         0.0   14.0    6.0    0.0    0.0      4.00 14.00  0.00  14.00
137 PROBE-S WORDS        10.0    5.0    1.2  -10.0    0.4      9.32 15.00  0.00  15.00
138 PROBE-RHET WORDS      0.0    0.0    0.0    0.0    0.0      0.00  0.00  0.00   0.00
139 ABIL POT WORDS        0.0    0.0    0.0   52.3   54.0     21.27 54.00  0.00  54.00
140 SELF REF WORDS        6.0   13.6   10.3    7.8    8.6     14.05 19.60  6.00  13.60
141 JOINT IMP WORDS      10.8    7.2   23.2   12.9    5.2     20.49 34.00 10.80  23.20
142 3RD PER INFO WDS      0.0    0.0    0.0    8.0    9.5      3.50  9.50  0.00   9.50
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E15

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                          SUMMARY OF VARIABLE STATISTICS
                                    FORGLORIA

LAUSES
VARIABLE                 PER 1 PER 2 PER 3 PER 4 PER 5     MEAN   MAX    MIN    RANGE

 1 AVE CLAUSE LNGTH      12.2  -1.5  -1.2  -8.2   1.1      10.24  13.33   4.00   9.33
 2 PCT. WORDS CONT.      62.0 -21.0 -23.0 -44.0 -34.0      37.60  62.00  18.00  44.00
 3 TYPE/TOKEN RATIO       0.4   0.0   0.1   0.2   0.2       0.48   0.57   0.37   0.20
 4 AVE WORD LENGTH        3.7  -0.2  -0.1   0.5   0.2       3.76   4.18   3.51   0.67
 5 PCT CLAUSES CONT      62.0 -28.0 -27.0 -58.0 -38.0      31.80  62.00   4.00  58.00
 6 PCT WORDS-5 LET.      15.0  -2.0   3.0   3.0   5.0      16.80  20.00  13.00   7.00
 7 PCT. 1ST PERSON       76.0 -21.0 -26.0 -62.0 -29.0      48.40  76.00  14.00  62.00
 8 PCT. 2ND PERSON        3.0  -3.0   2.0  -3.0  17.0       5.60  20.00   0.00  20.00
 9 PCT. 3RD PERSON       21.0  24.0  24.0  65.0  12.0      46.00  86.00  21.00  65.00
10 PCT. PAST TENSE       11.0  -2.0  -6.0 -11.0 -11.0       5.00  11.00   0.00  11.00
11 PCT PRESENT TNS       87.0   4.0  -1.0  12.0  12.0      92.40  99.00  86.00  13.00
12 PCT FUTURE TNS         3.0  -3.0   6.0  -3.0  -3.0       2.40   9.00   0.00   9.00
13 PCT NEUT MODE         26.0  38.0  38.0  60.0  14.0      56.00  86.00  26.00  60.00
14 PCT COGNATE MD        18.0  -9.0 -13.0  -4.0   2.0      13.20  20.00   5.00  15.00
15 PCT AFFECTIVE MD      42.0 -15.0 -10.0 -42.0  -9.0      26.80  42.00   0.00  42.00
16 PCT MIXED MODE        13.0 -13.0 -13.0 -13.0  -6.0       4.00  13.00   0.00  13.00
17 PCT POSITIVE V        11.0  -6.0  -2.0 -11.0   9.0       9.00  20.00   0.00  20.00
18 PCT NEGATIVE V        34.0 -34.0 -25.0 -34.0 -27.0      10.00  34.00   0.00  34.00
19 PCT MIXED V            0.0  18.0   0.0   0.0  27.0       9.00  27.00   0.00  27.00
20 PCT SCHOOL REF         0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
21 PCT FAMILY REF         0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
22 PCT COMBINATION        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
23 PAST/2ST/AFF/POS       0.0   5.0   0.0   0.0   0.0       1.00   5.00   0.00   5.00
24 PAST/2ND/AFF/POS       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
25 PAST/3RD/AFF/POS       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
26 PRES/1ST/AFF/POS       0.0   0.0   5.0   0.0  13.0       3.60  13.00   0.00  13.00
27 PRES/2ND/AFF/POS       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
28 PRES/3RD/AFF/POS       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
29 FUT/1ST/AFF/POS        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
30 FUT/2ND/AFF/POS        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
31 FUT/3RD/AFF/POS        0.0   0.0   5.0   0.0   0.0       1.00   5.00   0.00   5.00
32 PAST/1ST/AFF/MIX       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
33 PAST/2ND/AFF/MIX       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
34 PAST/3RD/AFF/MIX       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
35 PRES/1ST/AFF/MIX       0.0   9.0   0.0   0.0  13.0       4.40  13.00   0.00  13.00
36 PRES/2ND/AFF/MIX       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
37 PRES/3RD/AFF/MIX       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
38 FUT/1ST/AFF/MIX        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
39 FUT/2ND/AFF/MIX        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
40 FUT/3RD/AFF/MIX        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
41 PAST/1ST/AFF/NEG       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
42 PAST/2ND/AFF/NEG       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
43 PAST/3RD/AFF/NEG       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
44 PRES/1ST/AFF/NEG      24.0 -24.0 -19.0 -24.0 -24.0       5.80  24.00   0.00  24.00
45 PRES/2ND/AFF/NEG       0.0   0.0   0.0   0.0   7.0       1.40   7.00   0.00   7.00
46 PRES/3RD/AFF/NEG       8.0  -8.0  -3.0  -8.0  -8.0       2.60   8.00   0.00   8.00
47 FUT/1ST/AFF/NEG        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
48 FUT/2ND/AFF/NEG        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
49 FUT/3RD/AFF/NEG        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
50 PAST/1ST/MIX/POS       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
51 PAST/2ND/MIX/POS       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
52 PAST/3RD/MIX/POS       0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
53 PRES/1ST/MIX/POS       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
54 PRES/2ND/MIX/POS       0.0   0.0   0.0   0.0   7.0       1.40   7.00   0.00   7.00
55 PRES/3RD/MIX/POS       3.0  -3.0  -3.0  -3.0  -3.0       0.60   3.00   0.00   3.00
56 FUT/1ST/MIX/POS        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
57 FUT/2ND/MIX/POS        0.0   0.0   0.0   0.0   0.0       0.00   0.00   0.00   0.00
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 58 FUT/3RD/MIX/POS      30.0    0.0    0.0    0.0    0.0    30.00  30.00  30.00   0.00
 59 PAST/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 60 PAST/2ND/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 61 PAST/3RD/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 62 PRES/1ST/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 63 PRES/2ND/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 64 PRES/3RD/MIX/MIX      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 65 FUT/1ST/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 66 FUT/2ND/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 67 FUT/3RD/MIX/MIX       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 68 PAST/1ST/MIX/NEG      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 69 PAST/2ND/MIX/NEG      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 70 PAST/3RD/MIX/NEG      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 71 PRES/1ST/MIX/NEG      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 72 PRES/2ND/MIX/NEG     30.0  -30.0  -30.0  -30.0  -30.0     6.00  30.00   0.00  30.00
 73 PRES/3RD/MIX/NEG      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 74 FUT/1ST/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 75 FUT/2ND/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 76 FUT/3RD/MIX/NEG       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 77 PAST/1ST/COGNATE      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 78 PAST/2ND/COGNATE      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 79 PAST/3RD/GOGNATE      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 80 PRES/1ST/GOGNATR      1.0   -1.0   -1.0    0.0   -1.0     0.40   1.00   0.00   1.00
 81 PRES/2ND/COGNATE     80.0   10.0  -30.0  -40.0  -80.0    52.00  90.00   0.00  90.00
 82 PRES/3RD/COGNATE      0.0    0.0    0.0    0.0    2.0     0.40   2.00   0.00   2.00
 83 FUT/1ST/COGNATE       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 84 FUT/2ND/COGNATE      30.0  -30.0  -30.0  -30.0  -30.0     6.00  30.00   0.00  30.00
 85 FUT/3RD/COGNATE       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 86 PAST/1ST/NEUTRAL      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 87 PAST/2ND/NEUTRAL     30.0  -30.0   20.0  -30.0  -30.0    16.00  50.00   0.00  50.00
 88 PAST/3RD/NEUTRAL      0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 89 PRES/1ST/NEUTRAL      2.0   51.0    0.0   -2.0    0.0    11.80  53.00   0.00  53.00
 90 PRES/2ND/NEUTRAL     10.0   10.0   60.0  -10.0  -10.0    20.00  70.00   0.00  70.00
 91 PRES/3RD/NEUTRAL     30.0  -26.0   23.0  -22.0   41.0    33.20  71.00   4.00  67.00
 92 FUT/1ST/NEYTRAL      30.0  -20.0   30.0   30.0    0.0    38.00  60.00  10.00  50.00
 93 FUT/2ND/NEUTRAL       0.0    0.0   50.0    0.0    0.0    10.00  50.00   0.00  50.00
 94 FUT/3RD/NEUTRAL       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 95 PAST 1ST PERSON       5.0    0.0    0.0   -5.0   -5.0     3.00   5.00   0.00   5.00
 96 PAST 2ND PERSON       0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
 97 PAST 3RD PERSON       5.0    0.0   -5.0   -5.0   -5.0     2.00   5.00   0.00   5.00
 98 PRES 1ST PERSON      68.0  -18.0  -27.0  -54.0  -21.0    44.00  68.00  14.00  54.00
 99 PRES 2ND PERSON       3.0   -3.0    2.0   -3.0   17.0     5.60  20.00   0.00  20.00
100 PRES 3RD PERSON      16.0   25.0   25.0   70.0   17.0    43.40  86.00  16.00  70.00
101 FUT 1ST PERSON        3.0   -3.0    2.0   -3.0   -3.0     1.60   5.00   0.00   5.00
102 FUT 2ND PERSON        0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
103 FUT 3RD PERSON        0.0    0.0    5.0    0.0    0.0     1.00   5.00   0.00   5.00
104 AFFECT POSITIVE       5.0    0.0    4.0   -5.0    8.0     6.40  13.00   0.00  13.00
105 AFFECT MIXED          0.0    9.0    0.0    0.0   13.0     4.40  13.00   0.00  13.00
106 AFFECT NEGATIVE      37.0  -37.0  -28.0  -37.0  -30.0    10.60  37.00   0.00  37.00
107 MIXED POSITIVE        5.0   -5.0   -5.0   -5.0    2.0     2.40   7.00   0.00   7.00
108 MIXED MIXED           0.0    0.0    0.0    0.0    0.0     0.00   0.00   0.00   0.00
109 MIXED NEGATIVE        3.0   -3.0   -3.0   -3.0   -3.0     0.60   3.00   0.00   3.00
110 COGNITIVE            21.0  -12.0  -16.0   -7.0   -1.0    13.80  21.00   5.00  16.00
111 NEUTRAL              29.0   48.0   48.0   57.0   11.0    61.80  86.00  29.00  57.00
112 AFFECTIVE TOTAL      42.0  -28.0  -24.0  -42.0   -9.0    21.40  42.00   0.00  42.00
113 MIXED TOTAL           8.0   -8.0   -8.0   -8.0   -1.0     3.00   8.00   0.00   8.00
114 AFFECT+MIXED         50.0  -36.0  -32.0  -50.0  -10.0    24.40  50.00   0.00  50.00
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